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The Trade Wind Zone Oceanography Pilot Study Part V: Townsend Cromwell Cruises 14 and 15 March and April 1965

By Robert L. Charnell, David W. K. Au, and Gunter R. Seckel

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UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES

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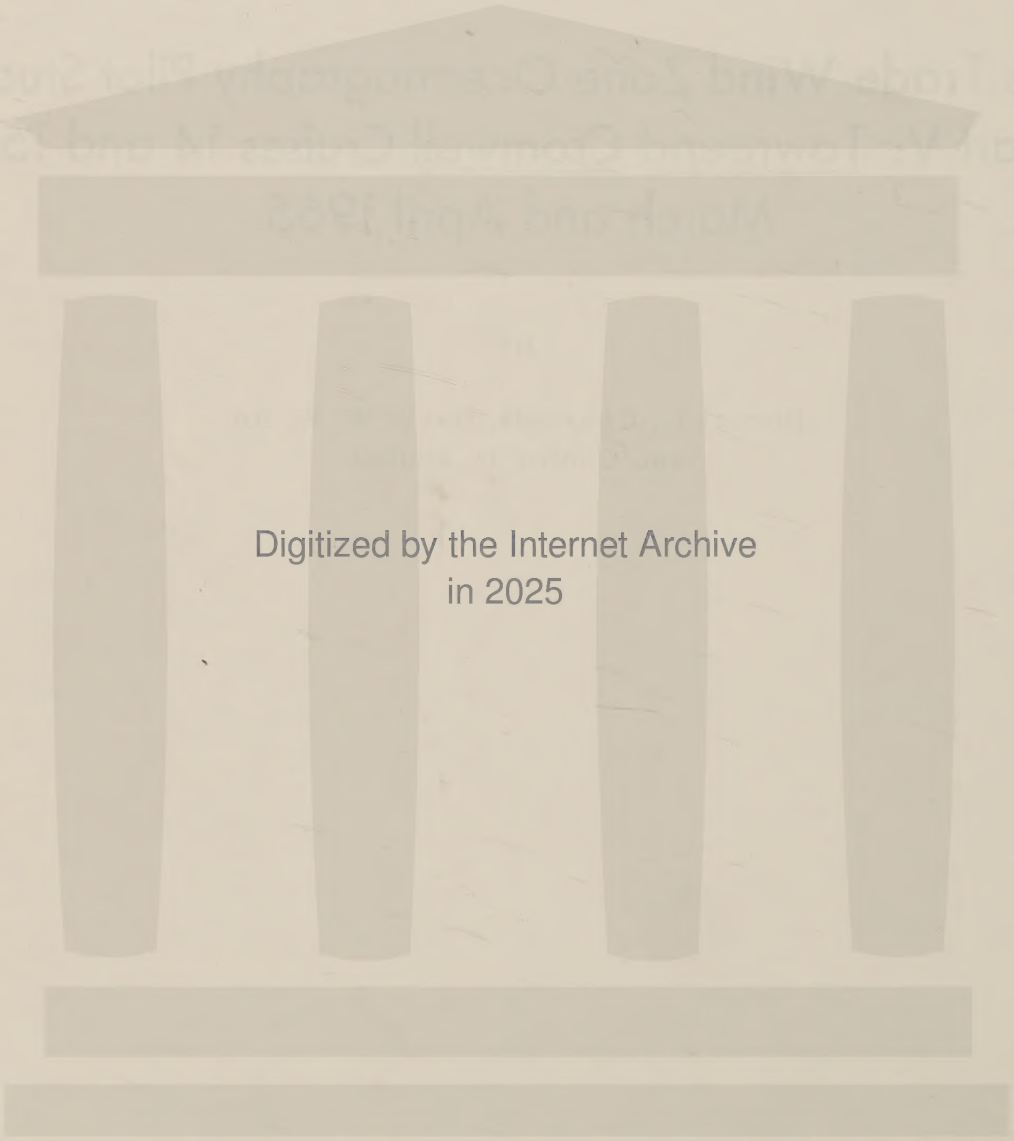

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The Trade Wind Zone Oceanography Pilot Study Part V: Townsend Cromwell Cruises 14 and 15 March and April 1965

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ABSTRACT

A standard grid of oceanographic stations in an area bounded by lat. 10° and 26° N., and long. 148° and 157° W., was occupied at monthly intervals between February 1964 and June 1965. For the fifth set of two cruises, Townsend Cromwell cruises 14 and 15, March and April 1965, oceanographic station data are tabulated, BT data are presented in vertical sections, and the distribution of surface temperature, surface salinity, and surface dynamic height relative to 1,200 m. are shown in charts for each cruise. Methods and procedures as well as the limitations of the data are discussed.

INTRODUCTION

This is the fifth of a series of reports presenting physical oceanographic data of the Trade Wind Zone Oceanography Pilot Study conducted by the Bureau of Commercial Fisheries Biological Laboratory, Honolulu. The data were obtained during a series of 16 monthly cruises between February 1964 and June 1965 over a set station pattern in an area near the Hawaiian Islands bounded approximately by lat. 10° and 26° N. and long. 148° and 157° W.

The complete set of observations represents a three-dimensional time-sequence distribution of properties (temperature, salinity....) in the trade wind zone of the central North Pacific. It is a pilot study of an investigation in which seasonal changes in the distribution of properties are to be explained in terms of 1) seasonal changes in the processes of net heat and water exchange across the sea surface, and 2) the effects of seasonal changes in wind stress and water motion. The Trade Wind Zone Oceanography Program was planned by Gunter R. Seckel and is carried out under his direction by HL (Bureau of Commercial Fisheries Biological Laboratory, Honolulu).

This report contains the BT (bathythermograph) and oceanographic station data for the 14th and 15th cruises in the series. Figure 1 shows the cruise track for the two cruises and gives the position of the Nansen bottle oceanographic casts and the BT casts.

Both cruises were made by the R/V Townsend Cromwell, commanded by Captain Robert E. K. D. Lee, with officers Jan Liefting and Pete Andrich. The scientific parties were composed of the following:

Townsend Cromwell, cruise 14:
March 8 to 28, 1965

Bernard M. Ito - HL - Field Party Chief
Jerome S. W. Marr - HL
John L. Matthews - HL
Robert M. Moncrief - HL
James H. Uchiyama - HL
Dayle N. Husted - Smithsonian Institution

Townsend Cromwell, cruise 15:
April 7 to 30, 1965

Note.--Robert L. Charnell, Oceanographer, presently with Hazelton Nuclear Science Corp., Palo Alto, California 94303, formerly with Bureau of Commercial Fisheries Biological Laboratory, Honolulu, Hawaii; David W. K. Au, Physical Science Technician and Gunter R. Seckel, Oceanographer, Bureau of Commercial Fisheries Biological Laboratory, Honolulu, Hawaii 96812.

Robert L. Charnell - HL - Field Party Chief
Barbara E. Boldt - HL
David Y. Hashimoto - HL
John L. Matthews - HL
Lloyd T. Watarai - HL
Vincent Hoeman - Smithsonian Institution
Warren King - Smithsonian Institution

OBSERVATIONS [1/]

In addition to the regular Nansen and BT casts shown in figure 1, BT casts were made at 18.5-km. (10-nautical-mile) intervals for studies of variability between stations 2 and 4, 17 and 19, and 23 and 25. Surface temperatures and salinity samples were taken from an inside pump system which has an intake at a depth of 8 feet. A Hytech Model 9006 Salinity-Temperature-Depth Measuring System[2/] was used during the cruises to collect additional data at stations south of 14° N. These data are not presented in this report.

To supplement the physical oceanographic data presented in this report, additional information of the following types was obtained.

Biological

A 1/2-hour surface plankton tow was taken daily at 2000 hours with a 1-m. net. Flyingfish which stranded themselves on deck were collected daily. Regular observations of fish schools, sea mammals, and birds were supplemented by more detailed bird counts by observers from the Smithsonian Institution.

Meteorological

Rain measurements as well as standard weather observations were taken four times daily. Radiation from sun and sky was measured and recorded daily with an Eppley pyranometer. These observations were supplemented by daily color photographs of clouds. Surface long wave radiation measurements were taken on the night BT stations with the Suomi-Kuhn net radiometer.

Current

Eight drift bottles, supplemented by plastic-enclosed drift cards (Barkley, Ito, and Brown, 1964) during the first and last days of each cruise, were released at each BT cast. Two current stations were occupied each cruise; both Ekman and Roberts current meters were used.

PREPARATION OF DATA

Standard oceanographic procedures were employed in the preparation of the data for this report. Salinity determinations were made on the University of Washington salinity bridge (Paquette, 1958). Duplicate determinations were made with an induction salinometer. When values differed more than 0.02 °/oo, the salinity was redetermined on the U.W. salinity bridge, and the mean of the salinity bridge determinations was reported. Oxygen concentrations were determined by the modified Winkler method (Thompson and Robinson, 1939). Inorganic PO_4-P was determined by the procedure of Robinson and Thompson (1948) as modified at the University of Washington. All thermometers had been calibrated at HL since April 1962. The reported temperatures are estimated to be accurate to ±0.02° C. Application of corrections to protected and unprotected thermometer readings and computations of thermometric depths and L-Z values were performed with an IBM 7040 digital computer at the University of Hawaii Computing Center with a program written at HL. Depths were determined by the use of values from the L-Z curve for the actual depth. This procedure gave depth estimated to be within ±10 m. down to 1,000 m. and within ±1 percent below 1,000 m.

Sigma-t, specific volume anomaly, and the dynamic height were computed on the IBM 7040 computer by the program prepared at HL and based on equations given by LaFond (1951). The computer also was used to interpolate all properties at standard depths by means of a subroutine furnished by the University of Washington Oceanography Department and based on the interpolation method outlined by Rattray (1962).

In the region of study, a sharp thermocline generally separates a surface mixed layer from the subsurface waters. Only infrequently do Nansen casts adequately define this configuration, with the result that the interpolation pro-

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[1/] All data not presented in this report are on file at the Bureau of Commercial Fisheries Biological Laboratory, Honolulu, Hawaii 96812

[2/] Trade names referred to in this publication do not imply endorsement of commercial products.

gram provides inaccurate values for temperature. BT data were used to correct the temperature-depth curve in the thermocline and the isothermal layer. When necessary, a value of temperature was chosen from the corrected curve at standard depths in the mixed layer and upper thermocline and, with the corresponding salinity value from the T-S curve, was used with the Nansen cast data in the interpolation program. The resulting interpolated values were much nearer the actual oceanographic situation as implied by the BT trace.

To estimate the validity of values for the surface distribution charts, the surface intake values of temperature and salinity were compared, for each cruise, with values from the surface Nansen bottles. For temperature, variation was fairly random so that the mean of the difference between the two values was well within the accuracy of the surface bucket thermometer. Variations were large, however, and the root mean square value computed from the above differences was as much as 0.53° C. The bucket salinity values also showed large variations and were usually larger than the Nansen bottle values, most probably owing to salt contamination at the time of sampling. The mean of the differences was about 0.01 °/oo and the root mean square value was within 0.20 °/oo for each cruise.

PRESENTATION OF DATA

For each of the two cruises the original as well as derived data and section plots for the properties have been included.

Tables 1 and 2 contain the oceanographic station data for cruises 14 and 15, respectively. In addition to the position, date, and time at each station, weather and sea conditions in standard notation have been included in the heading of each station. The first five columns of each station listing show the observed depth, temperature, salinity, oxygen, and phosphate, respectively; the next two columns contain calculated sigma-t and specific volume anomaly for the observed data. The next three columns present the interpolated values of temperature and salinity at standard depths and the last three columns contain sigma-t and the specific volume anomaly calculated from the interpolated data and the anomaly of dynamic height summed from the surface. The error terms, defined by the Rattray interpolation technique, that exceeded 0.10 for temperature and 0.05 for salinity have been noted below the tabulation for each station. Interpolated and extrapolated values as well as irregularities in the original data are noted in these tables.

Temperature distribution sections along long. 148° W., 151° W., 154° W., and 157° W. based on the 270-m. BT's are included; so are the shorter zonal sections between stations 7 and 8, 25 and 26, and 37 and 40. In addition, surface temperature and salinities are presented with each section. All the sections were plotted automatically by the model 566 Calcomp plotter with a program designed at HL. These seven BT sections are shown in figures 2 through 7 for cruise 14 and figures 8 through 13 for cruise 15.

The surface temperature distributions, based on intake temperature at each BT cast, are shown in figures 14 and 15 for cruises 14 and 15, respectively.

The surface salinity distributions, based on intake salinity samples at each BT cast, are shown in figures 16 and 17 for cruises 14 and 15, respectively.

The dynamic topography, relative to 1,200 m. for cruises 14 and 15, is shown in figures 18 and 19, respectively.

ACKNOWLEDGMENTS

The data for these cruises were processed by HL personnel under the direction of Mary Lynne Godfrey. Betty Ann L. Keala did the computer programing.

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Figure 1.--Track chart for Townsend Cromwell cruises 14 and 15. The large, numbered dots indicate the locations at which both hydrographic and BT (bathythermograph) casts were made; the smaller dots indicate locations at which only BT casts were made.

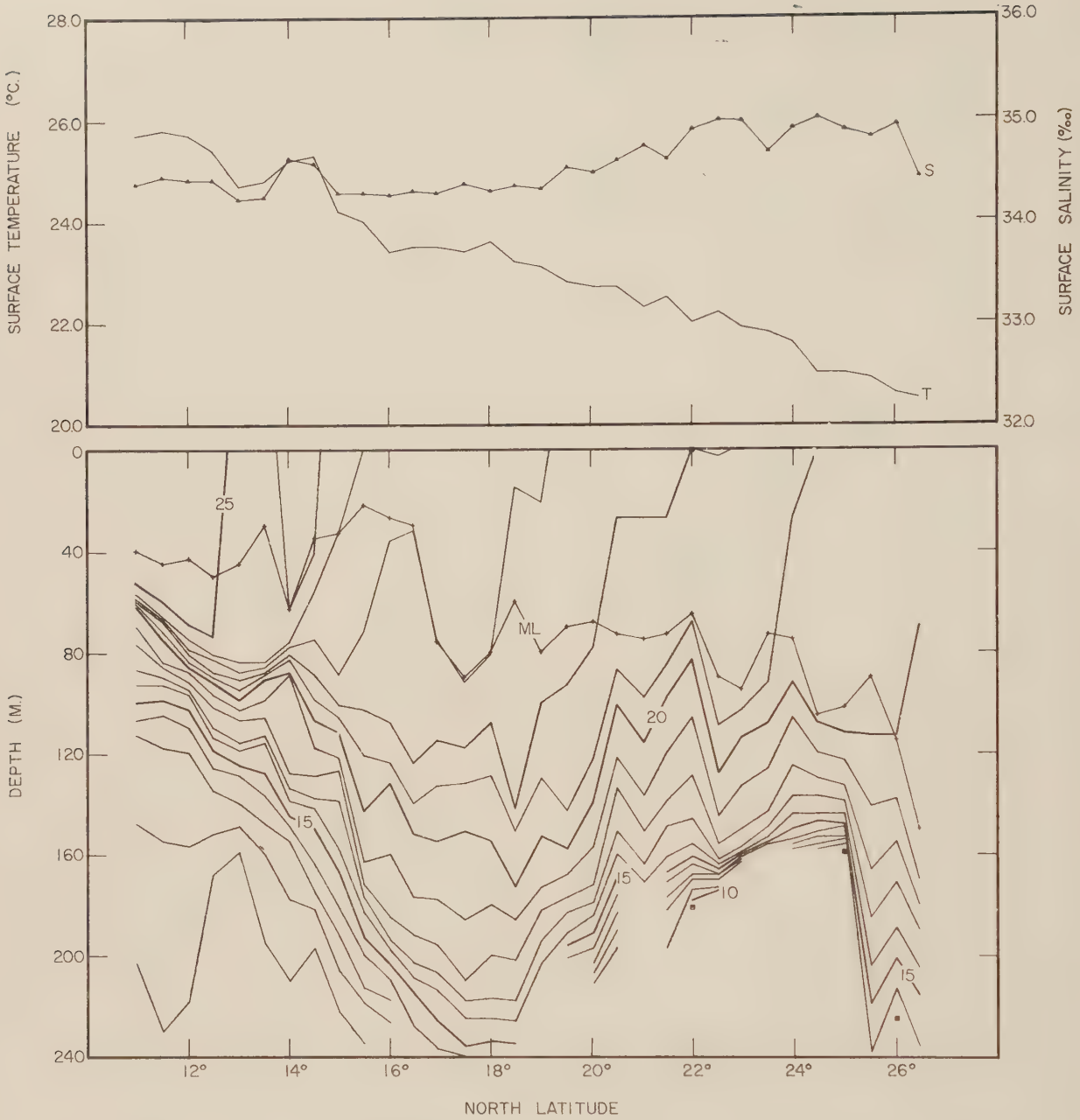
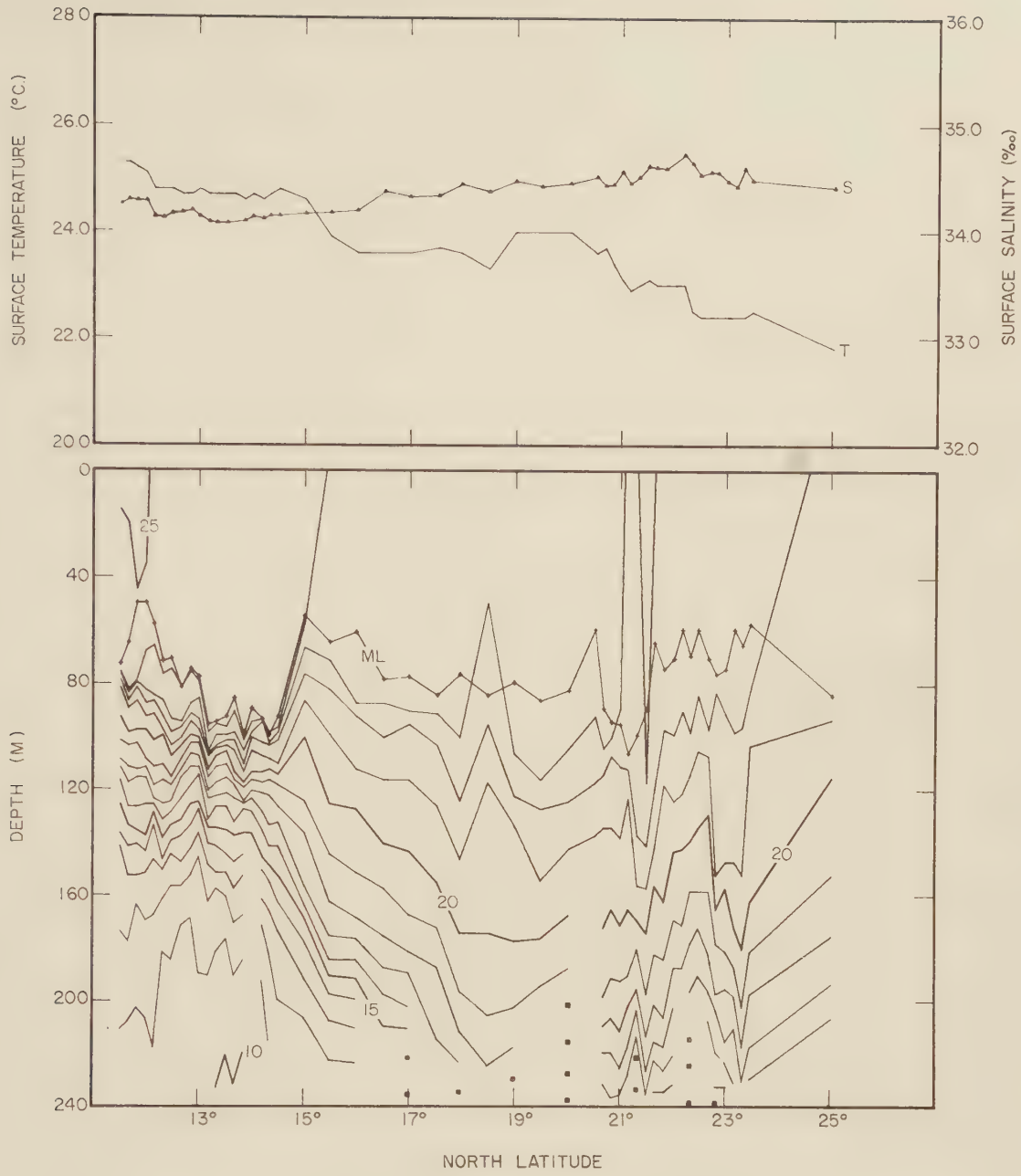


Figure 2.--Surface temperatures (° C.) and salinities (°/oo) (upper panel) and BT temperature (° C.) section (lower panel) for Townsend Cromwell cruise 14 along long. 148° W. The bottom of the ML (mixed layer) is shown by the starred line in the lower panel.



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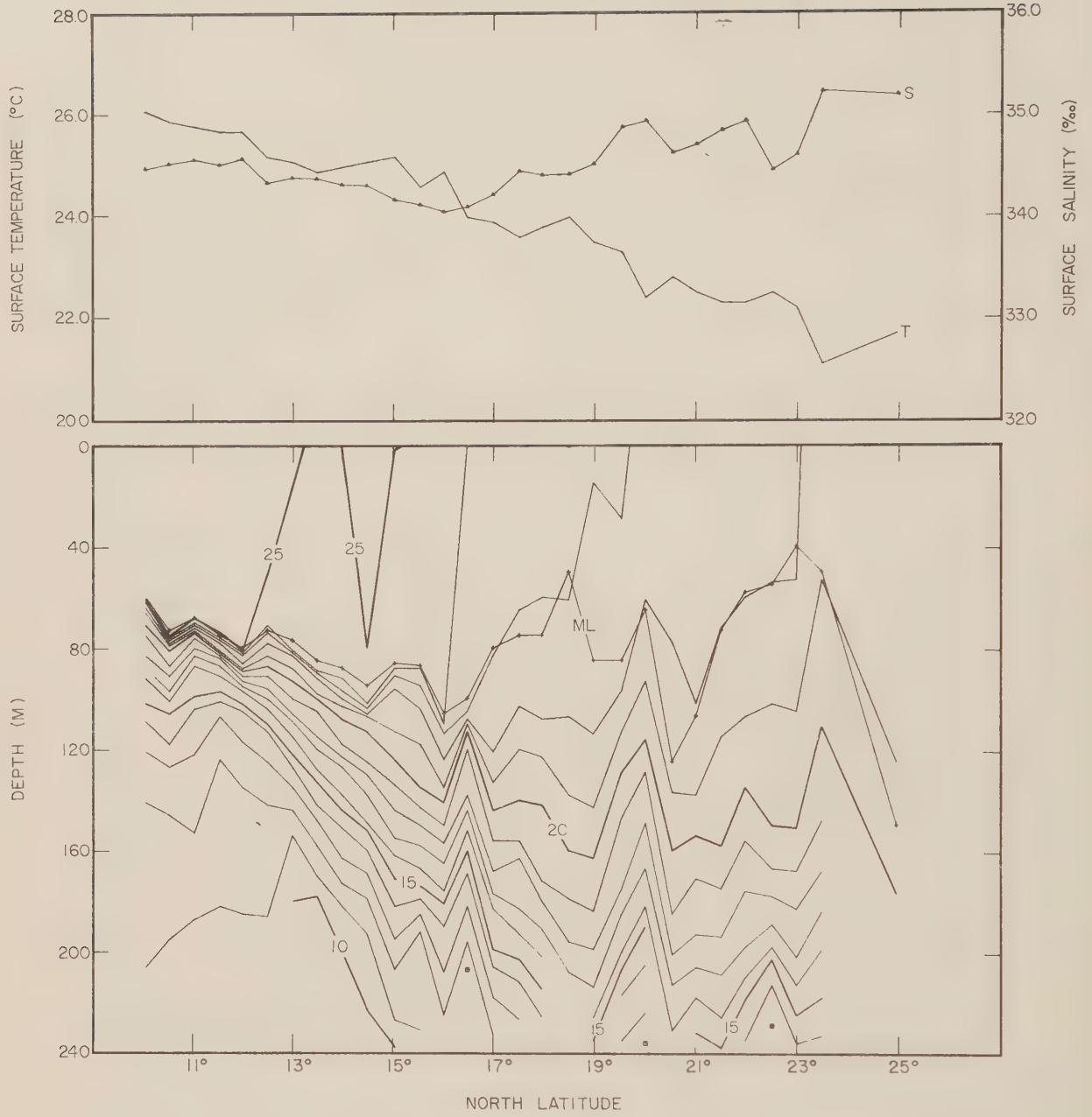

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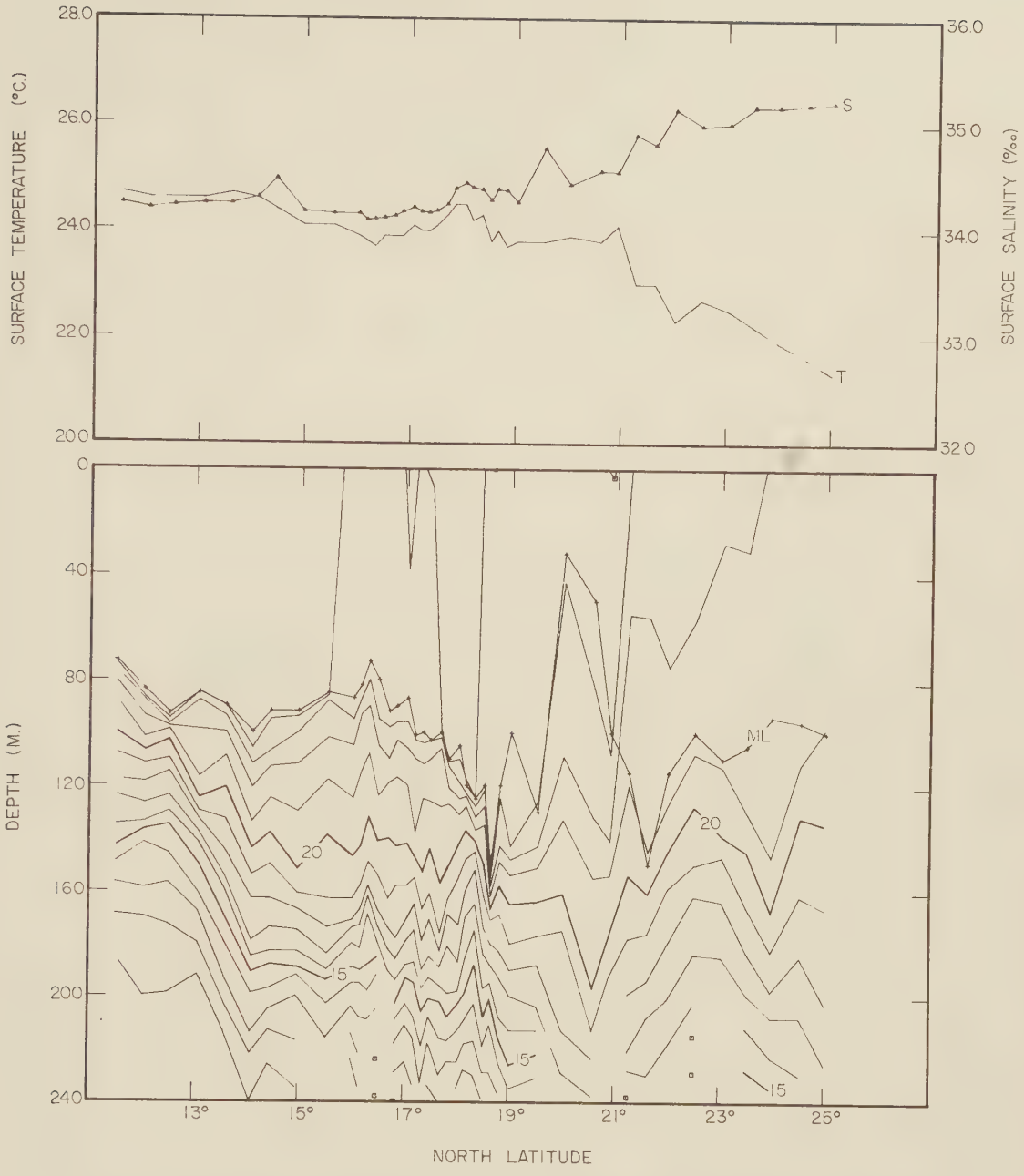

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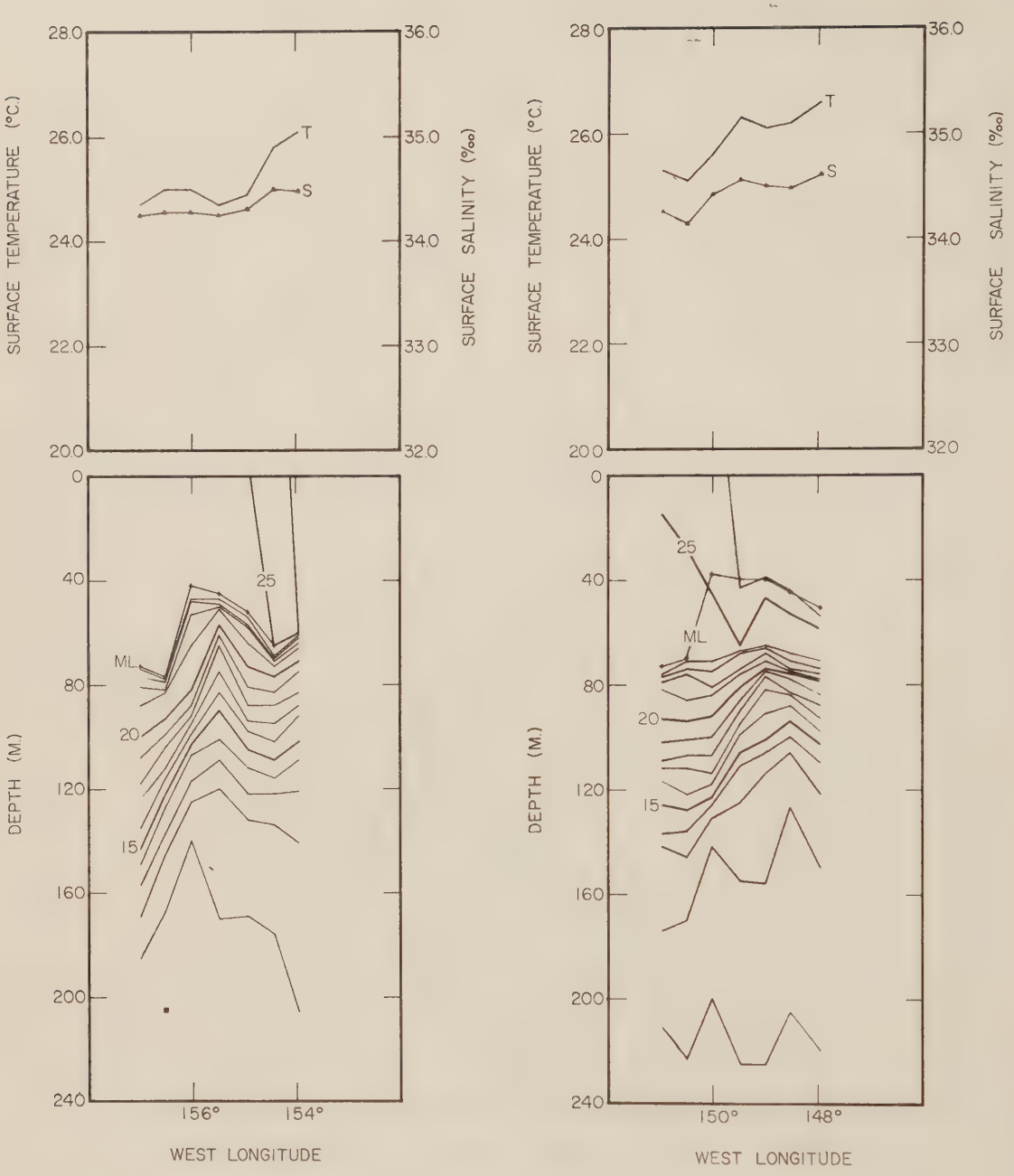

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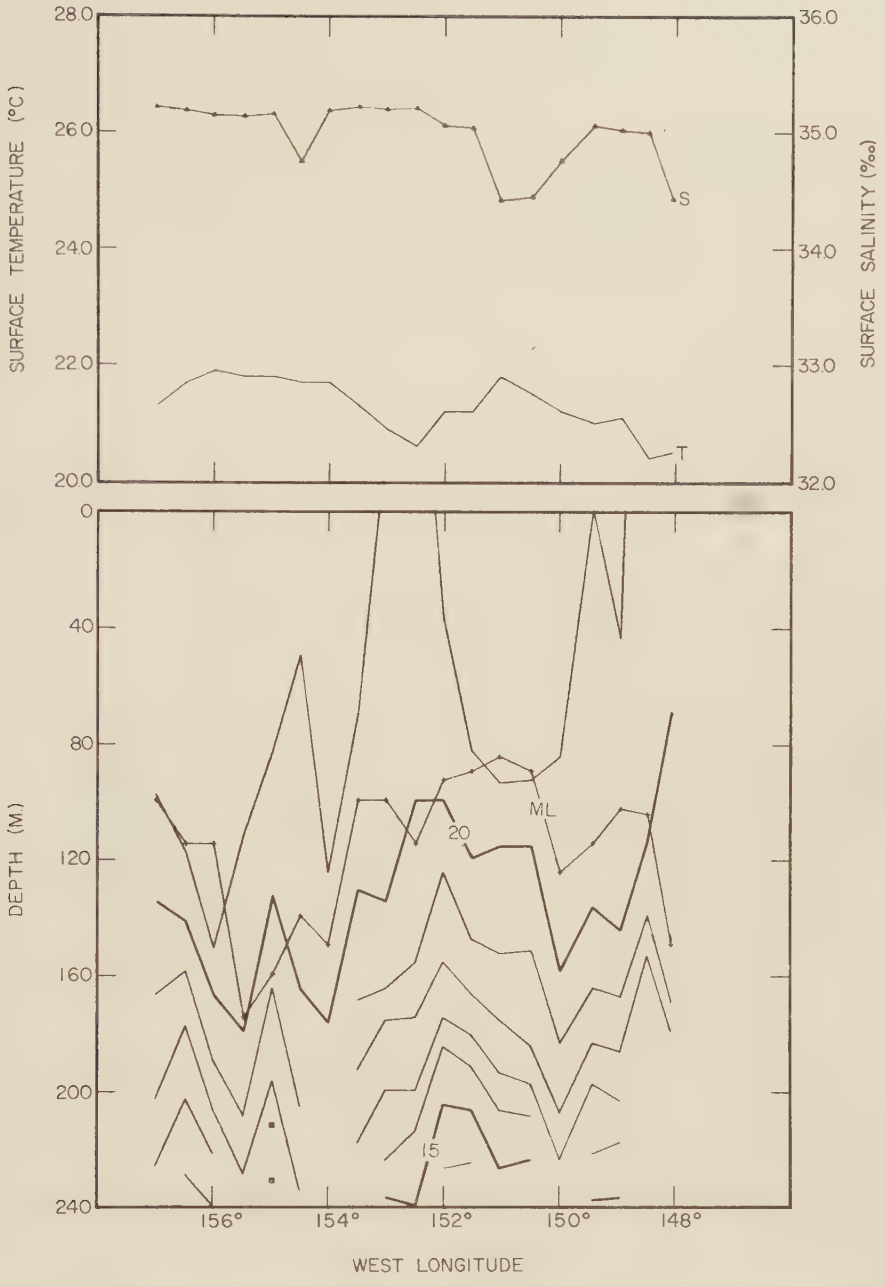

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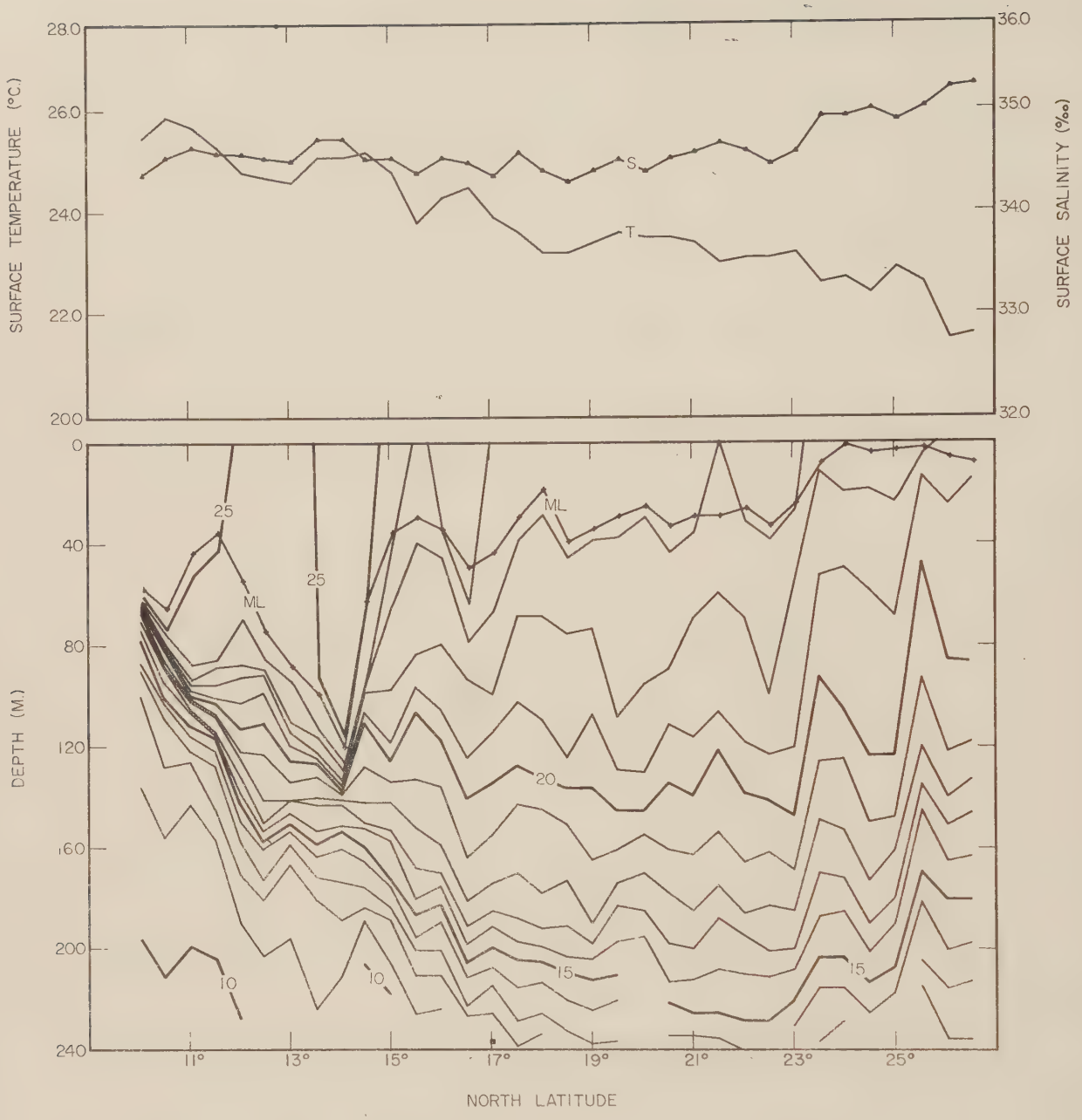

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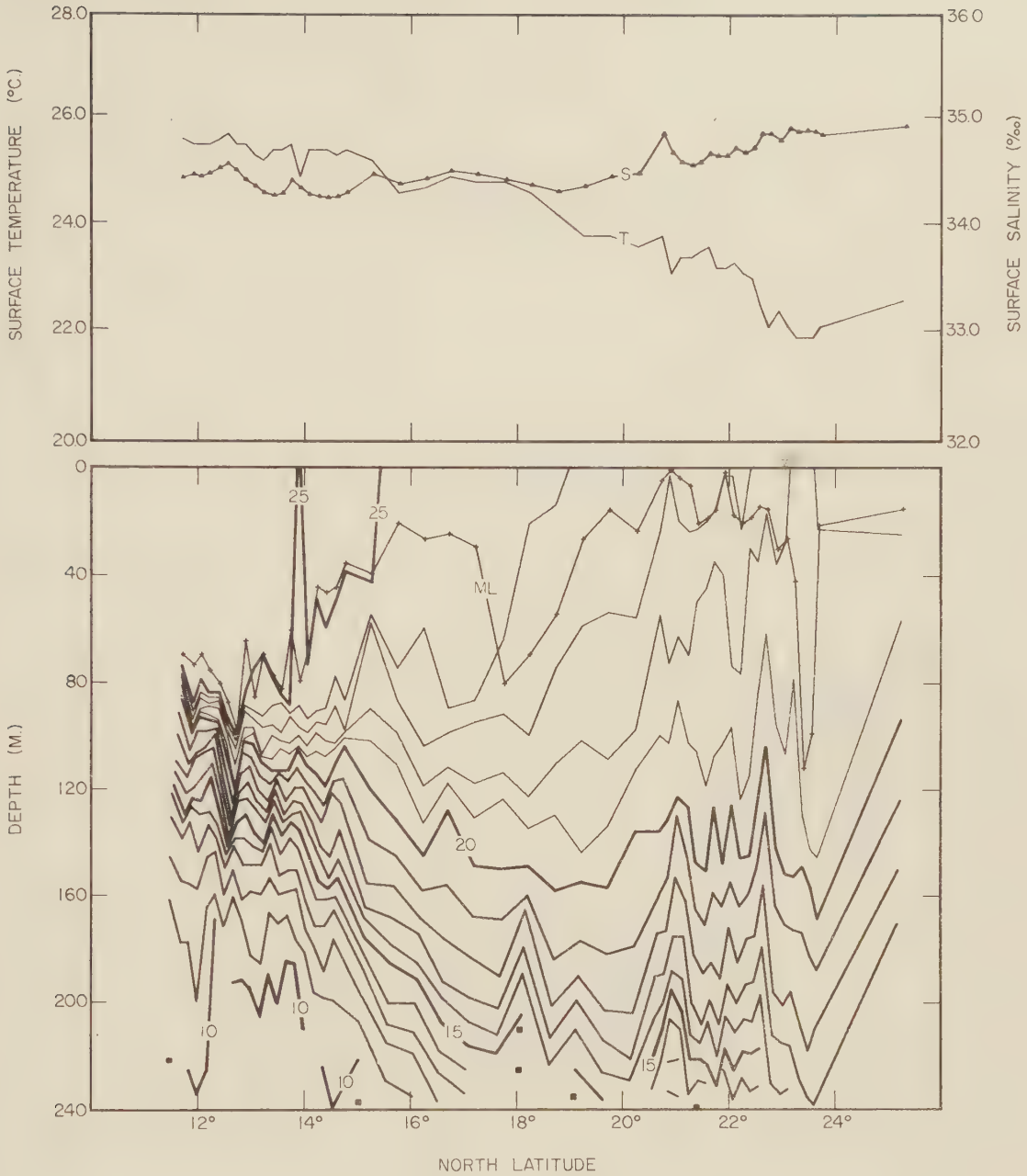

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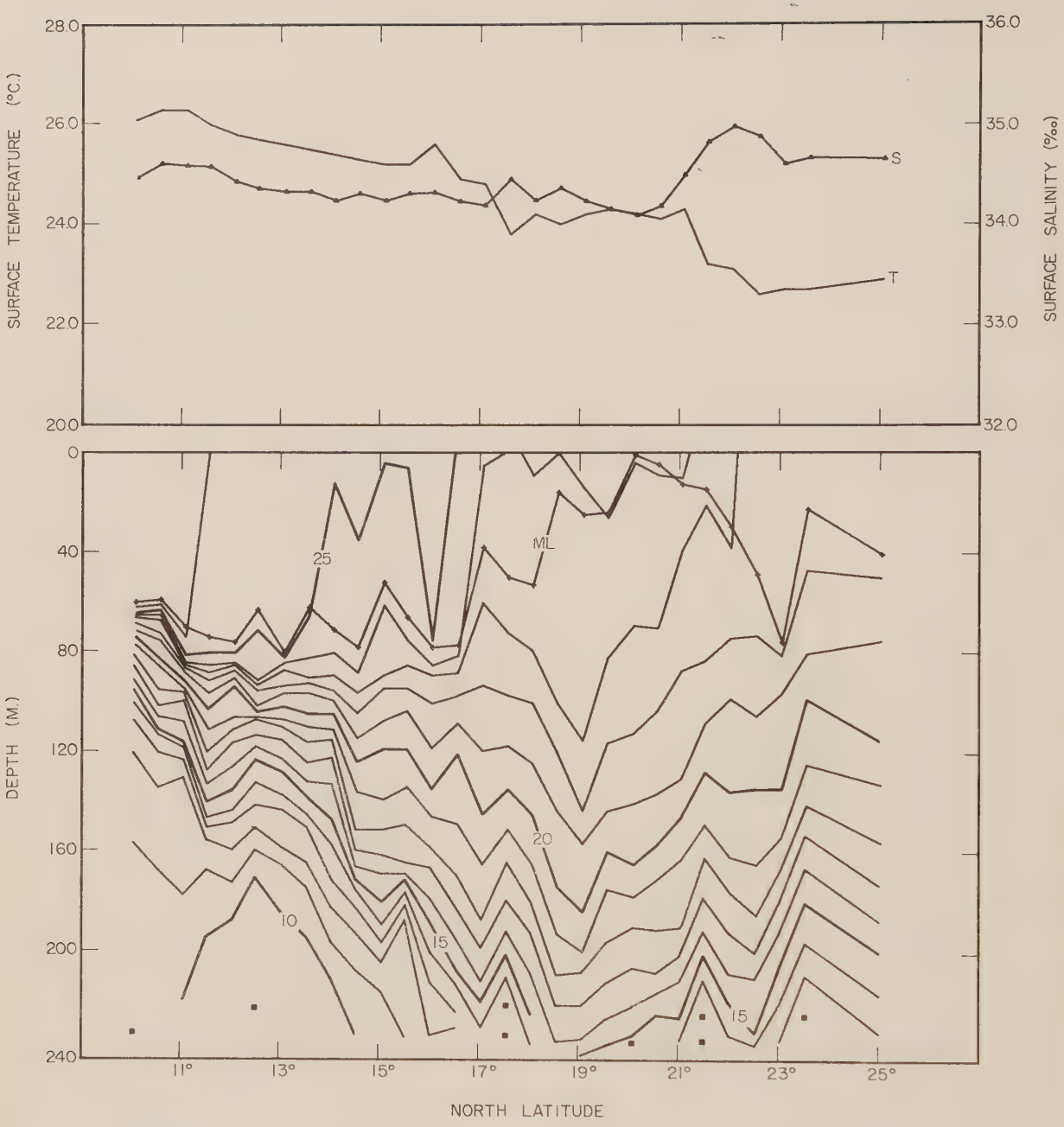

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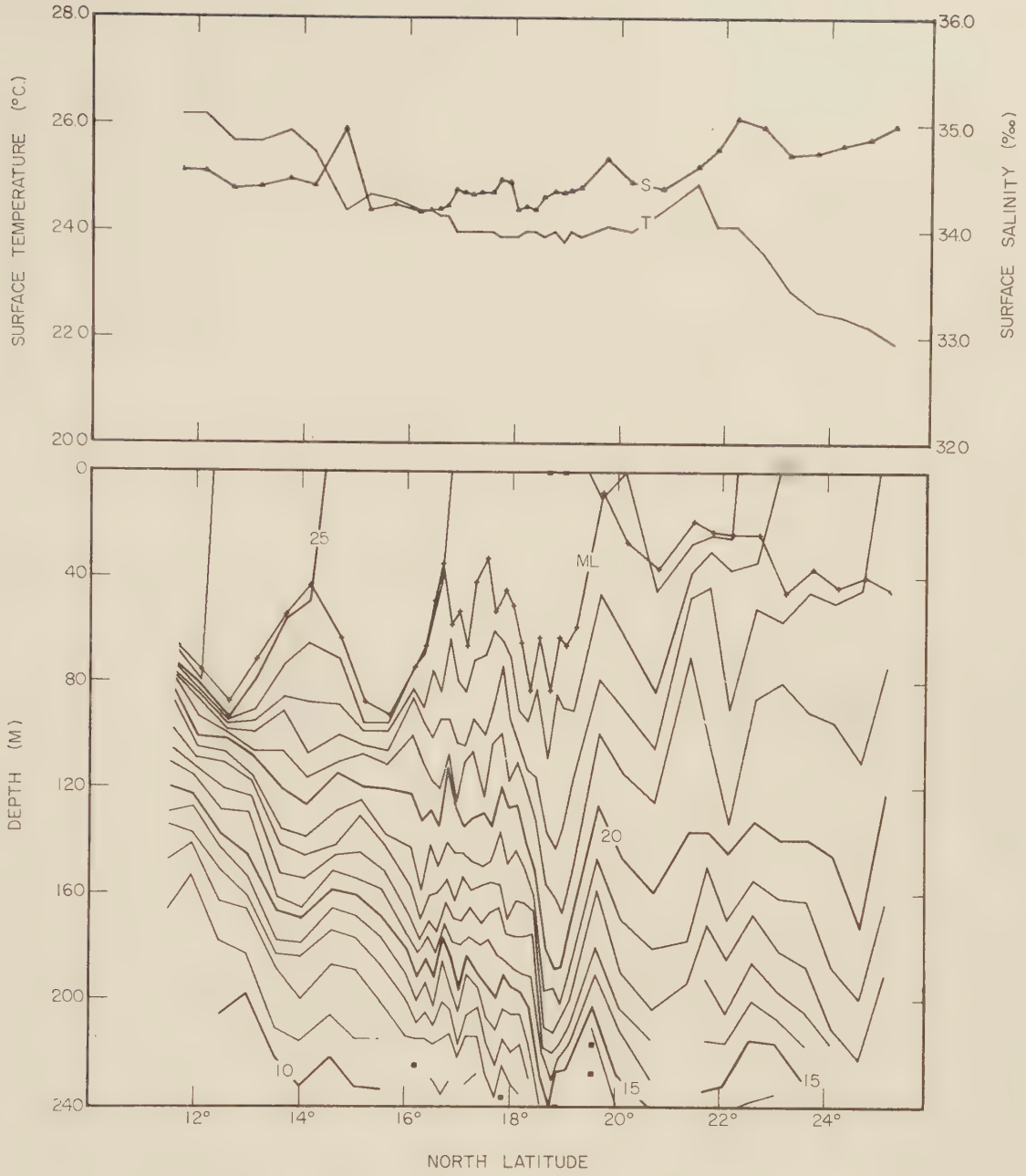

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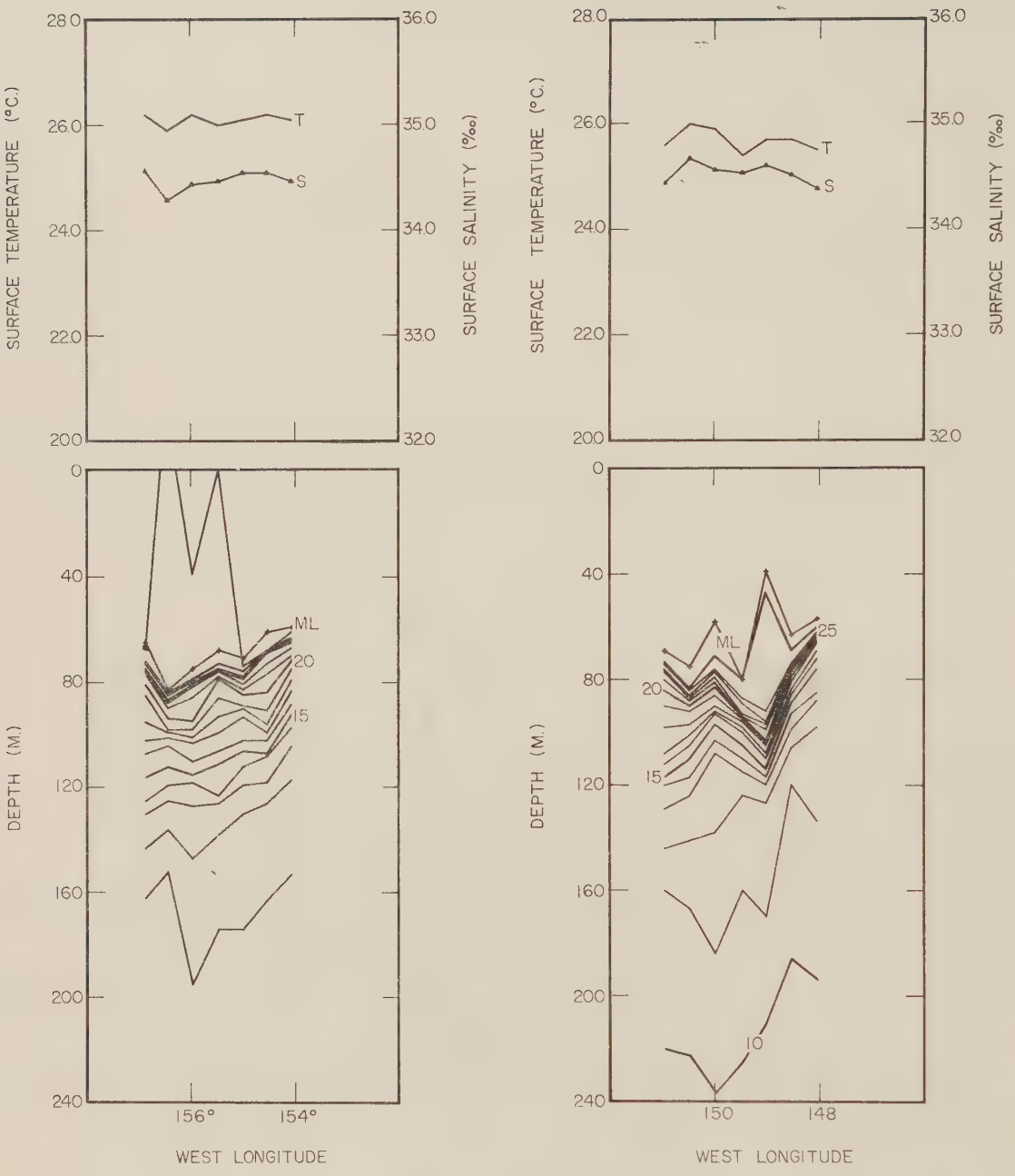

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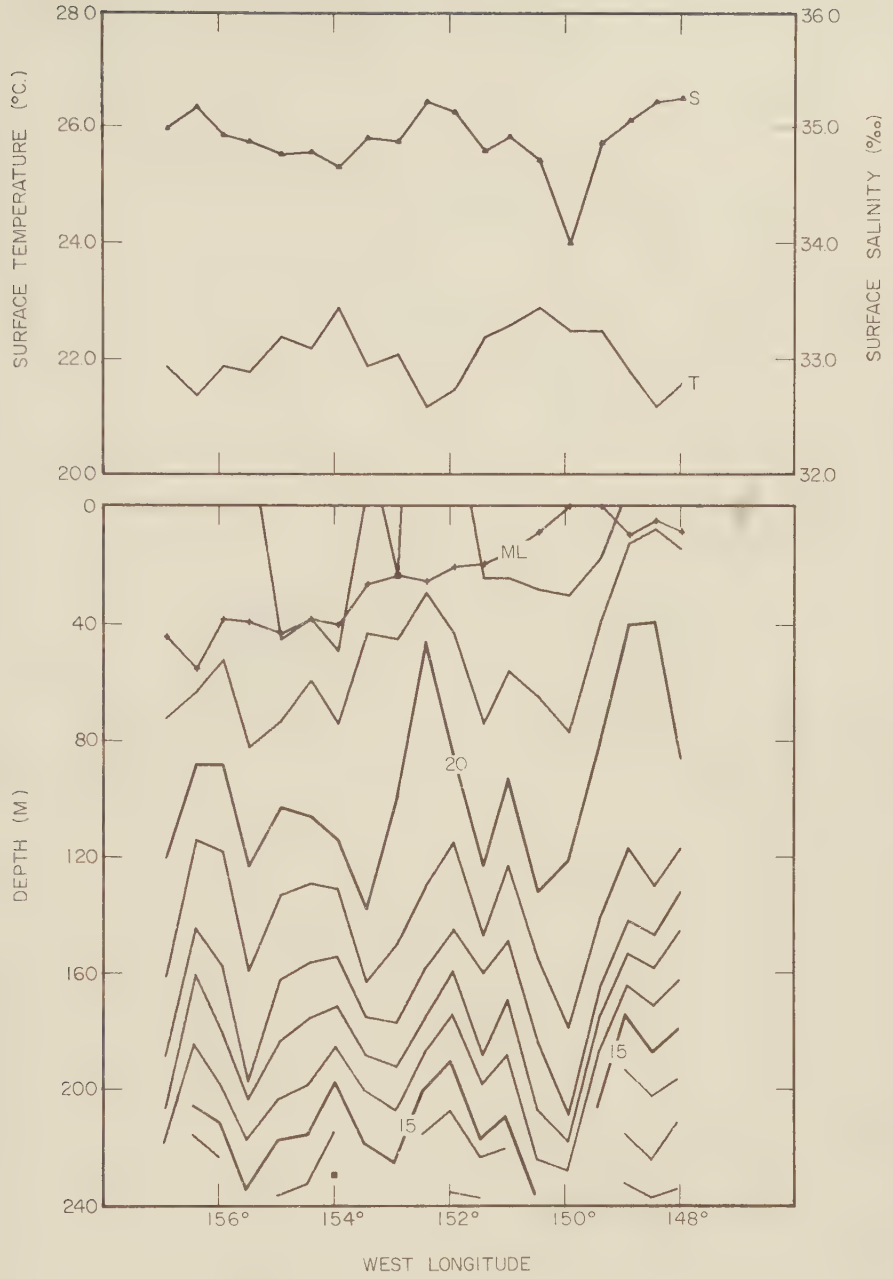

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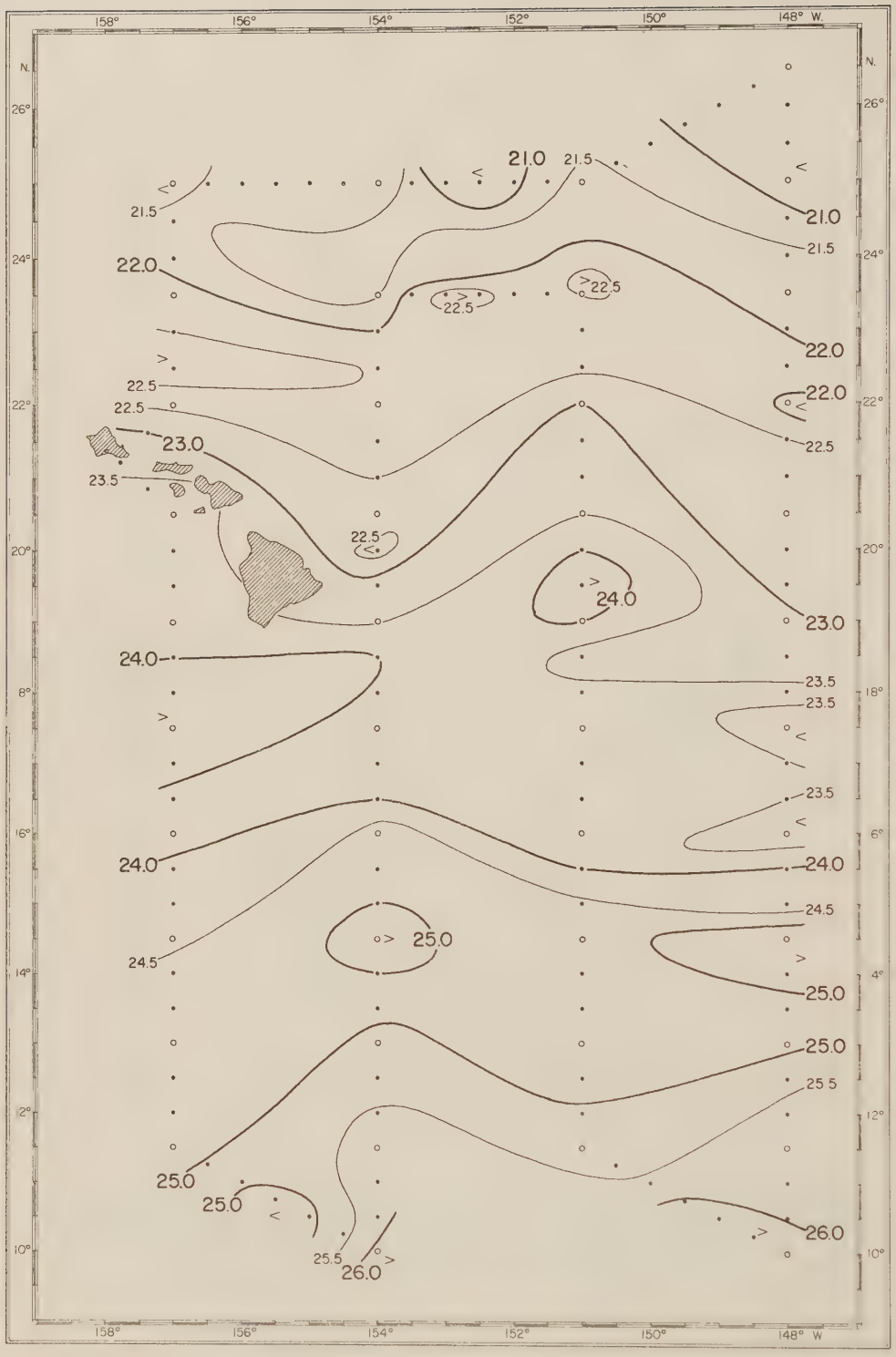
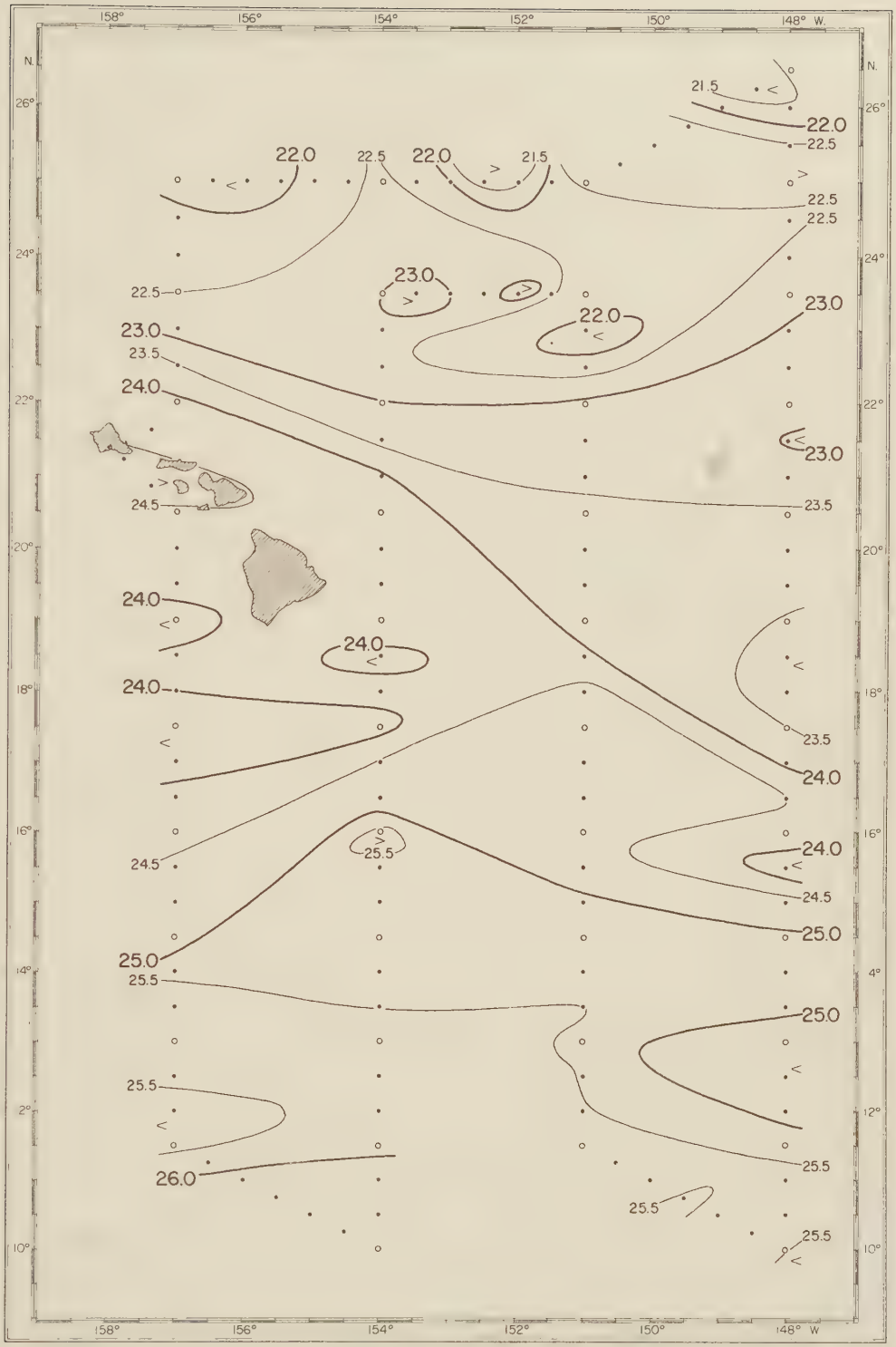


Figure 14.--Surface temperature distribution (° C.) based on intake temperature at each BT cast for Townsend Cromwell cruise 14.



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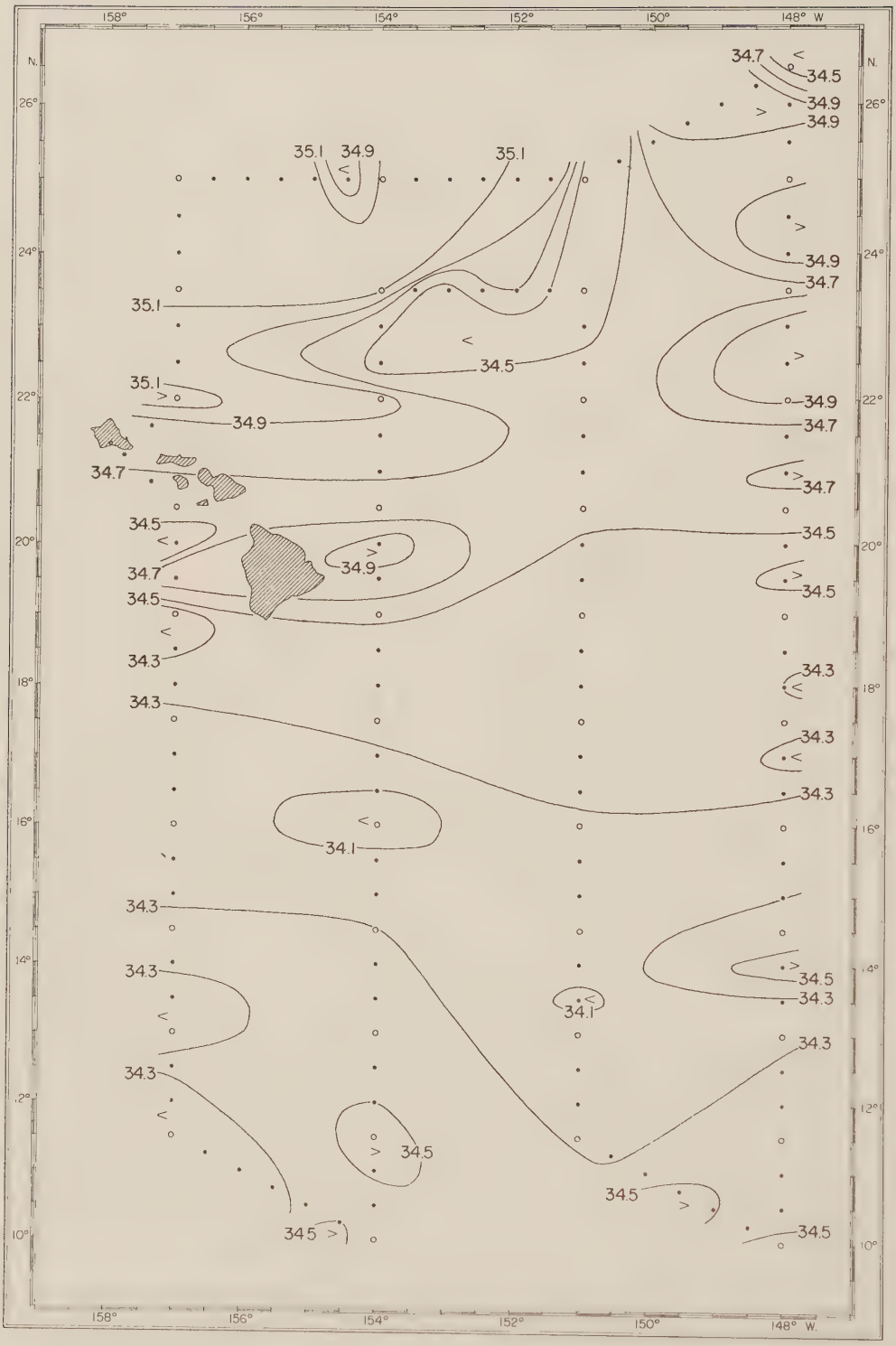

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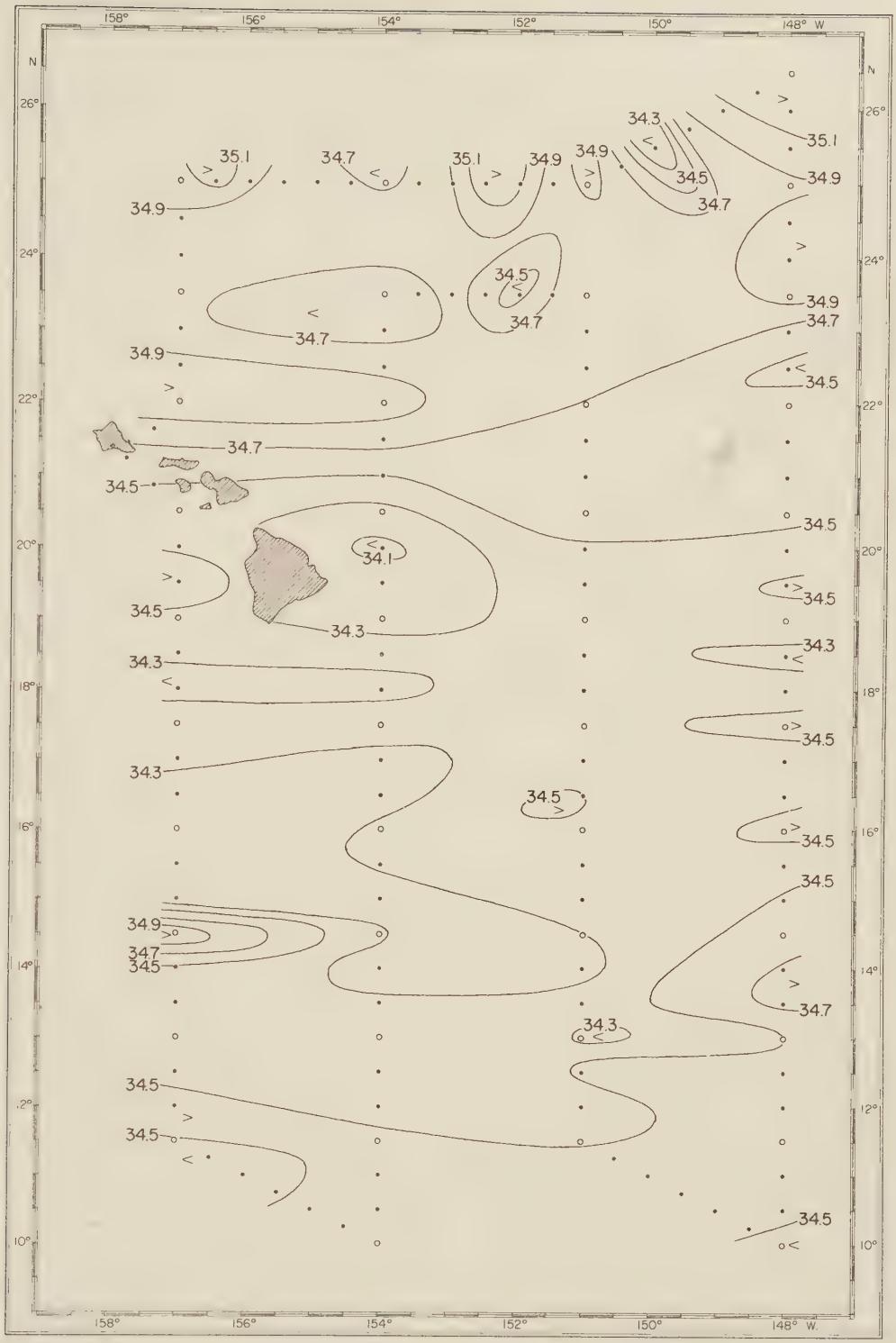

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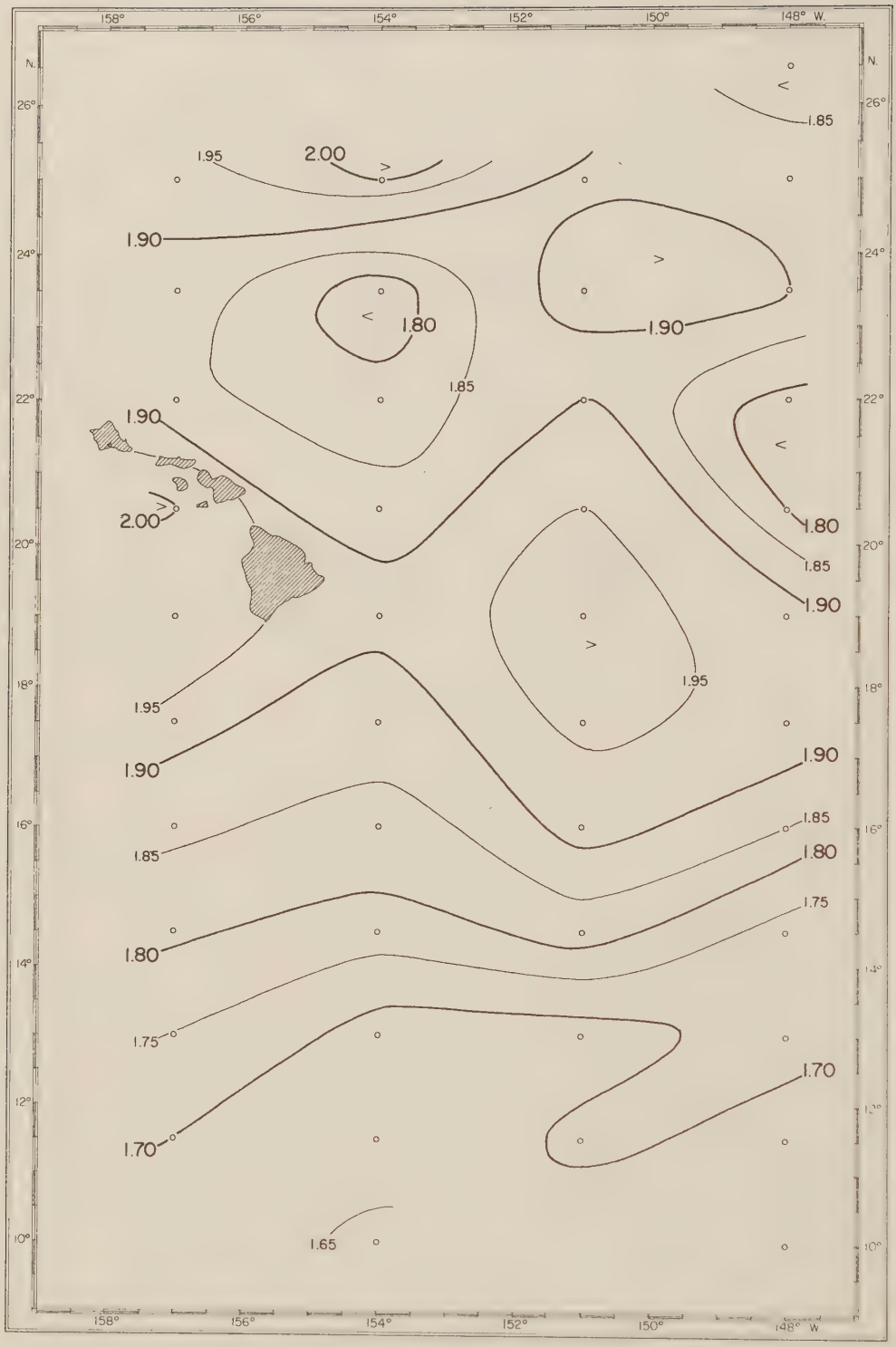


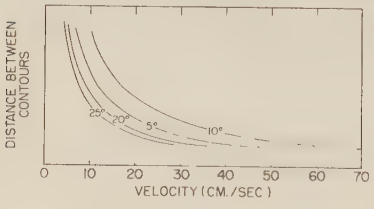
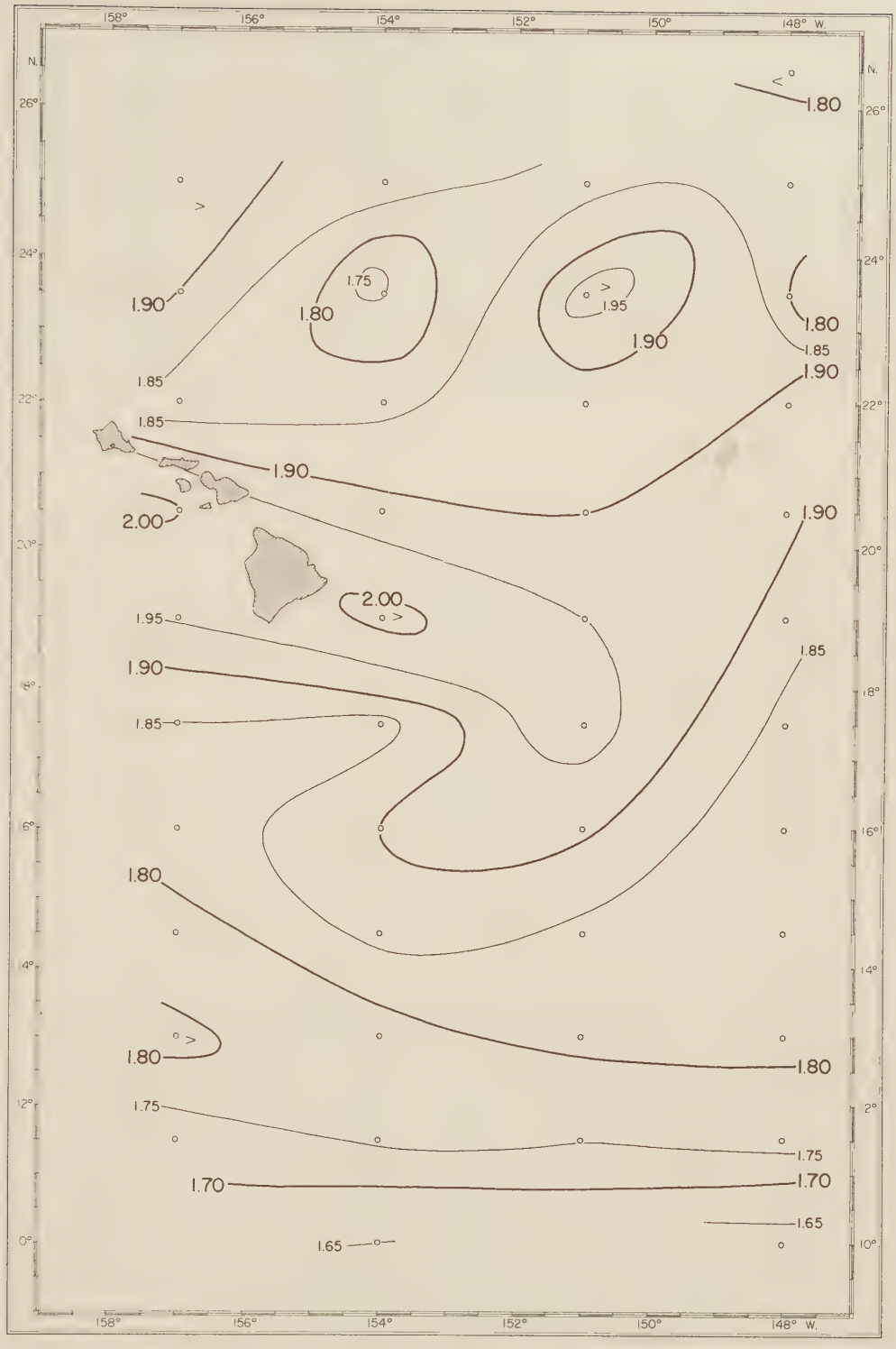


Figure 18.--Dynamic topography (dynamic meters) relative to 1,200 m. for Townsend Cromwell cruise 14.



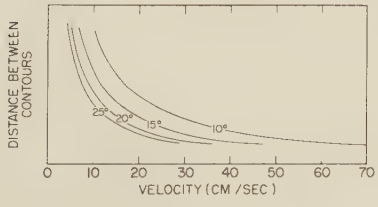


Figure 19.--Dynamic topography (dynamic meters) relative to 1,200 m. for Townsend Cromwell cruise 15.

TABLES

Information printed in the station heading has the following units or coding. Latitude and longitude are in degrees and minutes. Wet and dry bulb temperatures are in degrees Celsius. Wind speed is in knots. Barometric pressure is in tens and units of millibars (initial 9 or 10 omitted). Wind direction, weather, visibility, cloud type, and cloud cover are coded in the manner described by the International Ship Weather Code.

The observed data are presented in the following units: Depth in meters; temperature in degrees Celsius; salinity in grams per kilogram; oxygen in milliliters per liter; and phosphate (PO_4-P) in microgram-atoms per liter.

The derived data are listed with the following units: Density anomaly as sigma-t; specific volume anomaly (delta) in 10^5 cubic centimeters per gram; and dynamic depth anomaly (dyn. dpth.) in dynamic meters.

Table 1.--Original and derived oceanographic data for Townsend Cromwell cruise 14

CROMWELL 14, STATION 1, 20-35N LAT, 157-15W LONG, MAR. 9, 1965, 0800 G.C.T.
DRY BULB 23.6 WET BULB 20.9 WIND SPEED 10, DIR. 13 BAR. 20 WEATHER 01 VIS. 6 CLOUD TYPE , COVER 0

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.89	34.55			23.35	453.5	0.	23.89	34.55	23.35	453.5	0.000
9.	23.92	34.55			23.35	454.7	10.	23.92	34.55	23.35	454.8	0.046
30.Δ	23.80	34.59			23.41	449.3	20.	23.89	34.56	23.36	453.6	0.091
47.	23.53	34.72			23.59	433.0	30.	23.80	34.59	23.41	449.3	0.137
69.	23.02	34.92			23.89	405.3	50.	23.47	34.75	23.63	429.2	0.225
75.Δ	22.88	34.95			23.95	399.5	75.	22.88	34.95	23.95	399.5	0.330
92.	22.73	35.00			24.03	392.5	100.	22.65	35.03	24.08	388.2	0.429
114.	22.46	35.09			24.18	379.4	150.	21.06	35.13	24.59	340.9	0.613
137.	21.94	35.15			24.37	362.0	200.	19.58	35.13	24.99	304.4	0.775
159.	20.44	35.11			24.75	326.4	250.	14.58	34.46	25.67	240.4	0.913
181.	19.81	35.15			24.94	308.3	300.	11.67	34.21	26.06	203.4	1.025
203.	19.50	35.12			25.CC	303.5	400.	8.23	34.12	26.57	154.9	1.205
225.	17.63	34.86			25.27	278.0	500.	6.82	34.19	26.83	130.3	1.349
248.	14.74	34.48			25.65	242.3	600.	6.01	34.29	27.01	113.3	1.472
269.	13.38	34.33			25.82	226.2	700.	5.41	34.36	27.14	101.6	1.581
357.	9.32	34.13			26.41	170.0	800.	4.94	34.43	27.25	92.0	1.679
448.	7.44	34.14			26.7C	142.2	1000.	4.22	34.51	27.40	78.6	1.852
537.	6.50	34.24			26.91	123.0	1200.	3.62	34.56	27.50	69.4	2.001
716.	5.33	34.37			27.1E	100.2						
896.	4.58	34.48			27.33	84.5						
1079.	3.98	34.53			27.44	75.1						
1360.	3.24	34.57			27.54	65.4						

CROMWELL 14, STATION 2, 19- ON LAT, 157- OW LONG, MAR. 9, 1965, 1800 G.C.T.
DRY BULB 23.1 WET BULB 19.8 WIND SPEED 08, DIR. 16 BAR. 2C WEATHER 02 VIS. 9 CLOUD TYPE 8, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.93	34.22			23.C9	478.5	0.	23.93	34.22	23.09	478.5	0.000
10.	23.90	34.24			23.12	476.6	10.	23.90	34.24	23.12	476.6	0.048
52.	23.90	34.23			23.11	478.9	20.	23.89	34.24	23.12	476.4	0.096
78.	23.89	34.22			23.11	480.3	30.	23.89	34.25	23.12	476.6	0.144
103.	23.93	34.38			23.21	470.9	50.	23.90	34.23	23.11	478.6	0.240
129.	23.12	34.75			23.73	422.6	75.	23.89	34.22	23.10	480.4	0.361
155.	20.25	34.84			24.59	340.9	100.	23.95	34.35	23.19	473.2	0.481
180.	18.48	34.75			24.98	304.6	150.	20.84	34.84	24.44	355.9	0.690
206.	16.08	34.56			25.41	264.0	200.	16.63	34.61	25.32	272.7	0.849
232.	14.25	34.41			25.7C	236.8	250.	12.89	34.29	25.88	219.1	0.973
257.	12.42	34.25			25.95	213.2	300.	10.88	34.23	26.22	187.6	1.075
284.	11.44	34.22			26.11	198.0	400.	7.54	34.18	26.72	140.1	1.240
308.	10.61	34.24			26.27	182.4	500.	6.28	34.25	26.95	118.4	1.371
408.	7.32	34.17			26.74	137.7	600.	5.64	34.37	27.12	103.1	1.483
511.	6.23	34.27			26.97	116.8	700.	5.16	34.43	27.23	93.3	1.582
614.	5.57	34.38			27.14	101.3	800.	4.79	34.47	27.30	87.1	1.673
818.	4.73	34.47			27.31	86.3	1000.	4.23	34.52	27.40	78.6	1.841
1021.	4.18	34.52			27.41	77.8	1200.	3.58	34.56	27.50	69.3	1.991
1224.	3.50	34.56			27.51	68.3	1500.	2.89	34.59	27.59	60.7	2.189
1528.	2.83	34.59			27.6C	60.1						

CROMWELL 14, STATION 3, 17-28N LAT, 157- OW LONG, MAR. 10, 1965, 0300 G.C.T.
DRY BULB 23.8 WET BULB 20.4 WIND SPEED 11, DIR. 06 BAR. 17 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.05	34.16			23.01	486.2	0.	24.05	34.16	23.01	486.2	0.000
10.	23.97	34.15			23.03	485.0	10.	23.97	34.15	23.03	485.0	0.049
30.Δ	23.87	34.15			23.C6	483.0	20.	23.91	34.15	23.05	483.8	0.098
52.	23.86	34.15			23.06	483.5	30.	23.87	34.15	23.06	483.0	0.146
76.Δ	23.88	34.86			23.59	433.8	50.	23.86	34.14	23.05	484.3	0.244
100.Δ	23.30	34.95			23.83	412.1	75.	23.88	34.83	23.57	436.2	0.360
103.	22.45	35.01			24.12	384.5	100.	23.30	34.95	23.83	412.1	0.467
128.	20.64	35.16			24.73	326.8	150.	19.31	35.04	24.99	302.9	0.647
154.	19.06	35.0*			25.C2	299.6	200.	14.30	34.41	25.69	236.9	0.783
179.	16.94	34.71			25.32	271.5	250.	11.31	34.24	26.14	193.8	0.891
205.	13.72	34.35			25.7E	229.7	300.	10.10	34.37	26.46	164.3	0.982
231.	12.43	34.25			25.94	212.7	400.	8.82	34.49	26.77	136.4	1.133
255.	11.05	34.24			26.19	188.9	500.	7.62	34.48	26.94	121.0	1.263
282.	10.39	34.31			26.37	173.0	600.	6.69	34.46	27.06	110.2	1.380
307.	10.01	34.39			26.49	161.2	700.	5.97	34.47	27.16	101.2	1.487
408.	8.73	34.49			26.78	135.1	800.	5.39	34.49	27.24	93.4	1.585
512.	7.49	34.47			26.95	119.6	1000.	4.57	34.53	27.37	82.0	1.763
613.	6.59	34.46			27.07	109.0	1200.	3.87	34.55	27.46	73.5	1.920
817.	5.31	34.49			27.26	92.2	1500.	3.05	34.59	27.57	62.8	2.128
1020.	4.50	34.53			27.38	81.0						
1223.	3.80	34.55			27.47	72.7						
1527.	2.99	34.59			27.58	62.0						

ΔFROM BT DATA
*INTERPOLATED DATA

Table 1.--Continued

CROMWELL 14, STATION 4, 16- ON LAT, 157- OW LONG, MAR. 10, 1965, 1300 G.C.T.
DRY BULB 22.4 WET BULB 19.7 WIND SPEED 18, DIR. 06 BAR. 17 WEATHER 20 VIS. 7 CLOUD TYPE , COVER 9

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
DEPTH	TEMP.	SAL.	CXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.03	34.13			23.00	487.8	0.	24.03	34.13	23.00	487.8	0.000
10.	24.05	34.14			23.00	488.0	10.	24.05	34.14	23.00	488.0	0.049
52.	24.00	34.14			23.01	488.2	20.	24.05	34.14	23.00	488.2	0.098
77.	23.97	34.15			23.03	487.6	30.	24.04	34.14	23.00	488.3	0.147
100.Δ	22.00	34.86			24.13	383.1	50.	24.00	34.14	23.01	488.2	0.246
102.	21.80	34.90			24.22	375.0	75.	24.01	34.13	23.00	489.8	0.369
128.	20.40	35.02			24.69	330.8	100.	22.00	34.86	24.13	383.1	0.479
153.	18.87	34.95			25.03	298.6	150.	19.11	34.97	24.99	302.7	0.652
178.	15.38	34.50			25.52	252.3	200.	12.69	34.26	25.90	216.0	0.783
204.	12.28	34.24			25.97	210.0	250.	10.42	34.38	26.42	167.4	0.879
227.	10.71	34.26			26.27	180.9	300.	9.39	34.47	26.66	145.2	0.958
255.	10.41	34.41			26.44	165.4	400.	8.63	34.56	26.85	128.1	1.096
280.	9.62	34.41			26.58	152.7	500.	7.59	34.54	27.00	115.4	1.219
304.	9.36	34.48			26.67	143.9	600.	6.76	34.52	27.10	106.6	1.331
405.	8.59	34.56			26.86	127.7	700.	6.03	34.52	27.19	98.5	1.434
509.	7.49	34.54			27.01	114.4	800.	5.41	34.52	27.27	91.1	1.530
609.	6.69	34.52			27.10	106.0	1000.	4.50	34.53	27.38	81.0	1.704
810.	5.35	34.52			27.28	90.4	1200.	3.78	34.57	27.49	71.0	1.858
1012.	4.46	34.53			27.39	80.5	1500.	3.07	34.60	27.58	62.2	2.061
1214.	3.74	34.57			27.49	70.4						
1518.	3.04	34.60			27.58	61.8						

CROMWELL 14, STATION 5, 14-26N LAT, 157- 1W LONG, MAR. 10, 1965, 2200 G.C.T.
DRY BULB 23.8 WET BULB 21.0 WIND SPEED 15, DIR. 07 BAR. 16 WEATHER 03 VIS. 8 CLOUD TYPE 8, COVER 5

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
DEPTH	TEMP.	SAL.	CXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.61	34.48			23.09	479.0	0.	24.61	34.48	23.09	479.0	0.000
10.	24.61	34.47			23.08	480.1	10.	24.61	34.47	23.08	480.1	0.048
49.	24.55	34.48			23.11	479.2	20.	24.59	34.47	23.08	480.2	0.097
73.	24.58	34.50			23.11	479.6	30.	24.58	34.47	23.09	480.1	0.145
95.	23.27	35.01			23.88	406.7	50.	24.57	34.48	23.10	480.1	0.242
100.Δ	22.70	35.06			24.09	387.6	75.	24.53	34.55	23.16	474.8	0.362
119.	20.66	35.07			24.66	333.5	100.	22.70	35.06	24.09	387.6	0.471
143.	18.70	34.94			25.07	294.9	150.	18.04	34.85	25.17	285.6	0.640
166.	16.36	34.63			25.40	263.9	200.	12.42	34.31	25.99	207.6	0.765
190.	13.37	34.36			25.84	221.7	250.	10.37	34.38	26.42	166.9	0.859
214.	11.42	34.28			26.16	191.6	300.	9.24	34.41	26.64	147.2	0.938
237.	10.66	34.33			26.33	175.1	400.	8.08	34.53	26.91	121.9	1.074
261.	10.14	34.41			26.49	160.9	500.	7.09	34.51	27.04	110.8	1.191
284.	9.52	34.39			26.58	152.7	600.	6.40	34.51	27.14	102.5	1.299
378.	8.34	34.53			26.87	125.6	700.	5.79	34.52	27.22	95.3	1.399
473.	7.31	34.51			27.01	113.4	800.	5.28	34.52	27.29	89.1	1.492
569.	6.61	34.51			27.11	105.0	1000.	4.45	34.55	27.40	78.9	1.662
758.	5.48	34.52			27.26	91.5	1200.	3.78	34.57	27.49	70.6	1.814
950.	4.64	34.54			27.37	81.4						
1144.	3.96	34.57			27.47	72.5						
1444.	3.19	34.60			27.57	63.2						

CROMWELL 14, STATION 6, 13- 4N LAT, 157- 2W LONG, MAR. 11, 1965, 0600 G.C.T.
DRY BULB 24.0 WET BULB 21.4 WIND SPEED 16, DIR. 07 BAR. 15 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 2

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
DEPTH	TEMP.	SAL.	CXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.57	34.22			22.90	496.6	0.	24.57	34.22	22.90	496.6	0.000
10.	24.56	34.22			22.91	496.7	10.	24.56	34.22	22.91	496.7	0.050
48.Δ	24.51	34.25			22.94	494.6	20.	24.56	34.25	22.93	495.3	0.100
50.	24.50	34.24			22.94	495.1	30.	24.55	34.26	22.94	494.5	0.150
74.	23.87	34.46			23.29	462.3	50.	24.50	34.24	22.94	495.1	0.250
99.	21.02	34.90			24.43	354.4	75.	23.78	34.48	23.33	458.3	0.370
124.	17.56	34.62			25.11	290.5	100.	20.89	34.89	24.46	351.3	0.472
149.	14.25	34.43			25.71	233.0	150.	14.11	34.42	25.73	231.0	0.618
173.	11.48	34.26			26.13	193.2	200.	10.95	34.48	26.40	168.6	0.719
199.	10.97	34.47			26.39	169.3	250.	10.35	34.63	26.62	148.0	0.799
222.	10.54	34.57			26.54	155.1	300.	9.82	34.66	26.74	138.1	0.871
247.	10.38	34.63			26.62	148.5	400.	8.55	34.60	26.89	124.2	1.003
273.	10.10	34.63			26.67	144.3	500.	7.67	34.56	27.00	115.6	1.124
298.	9.85	34.66			26.73	138.5	600.	6.74	34.53	27.10	105.8	1.236
396.	8.59	34.60			26.89	124.6	700.	5.99	34.52	27.20	97.4	1.339
496.	7.71	34.56			26.99	116.0	800.	5.39	34.53	27.28	90.1	1.434
595.	6.78	34.53			27.10	106.3	1000.	4.48	34.56	27.41	78.3	1.604
793.	5.43	34.53			27.27	90.6	1200.	3.80	34.58	27.50	70.2	1.754
992.	4.51	34.56			27.40	78.7						
1191.	3.86	34.58			27.49	70.9						
1492.	3.13	34.60			27.58	62.8						

ΔFROM BT DATA

Table 1.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 14, STATION 7, 11-30N LAT, 157- 0W LONG, MAR. 11, 1965, 1600 G.C.T.
DRY BULB 24.0 WET BULB 21.6 WIND SPEED 18, DIR. 06 BAR. 14 WEATHER 02 VIS. 6 CLOUD TYPE 5, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.77	34.26			22.87	499.5	0.	24.77	34.26	22.87	499.5	0.000
9.Δ	24.78	34.26			22.87	500.1	10.	24.78	34.26	22.87	500.2	0.050
30.Δ	24.77	34.26			22.87	500.7	20.	24.78	34.26	22.87	500.5	0.101
49.	24.75	34.26			22.88	500.8	30.	24.77	34.26	22.87	500.7	0.151
73.	23.55	34.43			23.36	455.5	50.	24.74	34.26	22.89	500.3	0.252
97.	20.03	34.86			24.67	331.9	75.	23.30	34.47	23.47	445.4	0.371
120.	16.80	34.62			25.29	273.0	100.	19.60	34.85	24.77	322.1	0.468
144.	13.74	34.37			25.77	227.0	150.	13.02	34.33	25.89	216.2	0.603
167.	11.39	34.27			26.16	190.7	200.	10.52	34.43	26.44	164.4	0.699
191.	10.68	34.37			26.36	171.5	250.	10.14	34.65	26.68	142.8	0.777
212.	10.39	34.52			26.53	156.0	300.	9.50	34.63	26.77	134.8	0.847
235.	10.32	34.64			26.64	146.5	400.	8.38	34.60	26.92	121.5	0.976
258.	10.03	34.65			26.69	141.4	500.	7.33	34.56	27.04	110.7	1.093
281.	9.73	34.64			26.74	137.6	600.	6.46	34.54	27.15	101.5	1.200
373.	8.68	34.61			26.88	124.8	700.	5.75	34.54	27.24	93.3	1.299
466.	7.67	34.57			27.01	114.1	800.	5.18	34.54	27.32	86.3	1.390
558.	6.80	34.54			27.11	105.3	1000.	4.33	34.57	27.43	75.9	1.554
744.	5.49	34.54			27.27	90.0	1200.	3.69	34.59	27.51	68.3	1.700
931.	4.58	34.56			27.40	78.9						
1119.	3.96	34.58			27.48	71.5						
1420.	3.23	34.61			27.57	62.8						

CROMWELL 14, STATION 7A, 10- 3N LAT, 153-56W LONG, MAR. 12, 1965, 1700 G.C.T.
DRY BULB 25.0 WET BULB 21.8 WIND SPEED 16, DIR. 06 BAR. 15 WEATHER 02 VIS. 8 CLOUD TYPE 6, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	26.14	34.47	4.86	0.32	22.61	524.5	0.	26.14	34.47	22.61	524.5	0.000
9.Δ	26.17	34.47	4.96	0.37	22.60	525.8	10.	26.19	34.47	22.59	526.6	0.053
30.Δ	26.16	34.47			22.61	526.3	20.	26.29	34.46	22.56	530.4	0.106
48.	24.69	34.59	5.01	0.36	23.15	475.3	30.	26.16	34.47	22.61	526.3	0.159
50.Δ	23.10	34.68			23.68	424.1	50.	23.10	34.68	23.68	424.1	0.255
72.	17.83	34.69	4.52	0.63	25.10	290.0	75.	17.27	34.65	25.20	279.9	0.344
97.	14.18	34.40	3.31	1.33	25.70	232.4	100.	13.95	34.42	25.77	226.7	0.408
120.	12.86	34.58	1.02	2.30	26.11	193.9	150.	11.44	34.62	26.42	165.8	0.506
145.	11.49	34.59	0.83	2.29	26.39	168.4	200.	11.14	34.74	26.57	152.5	0.587
169.	11.48	34.72	0.46	2.39	26.49	159.3	250.	10.41	34.73	26.69	142.1	0.661
193.	11.24	34.74	0.31	2.34	26.55	154.1	300.	9.95	34.72	26.76	136.0	0.731
217.	10.89	34.74	0.36	2.10	26.61	148.5	400.	9.16	34.67	26.86	128.3	0.864
242.	10.52	34.73	0.40	2.38	26.67	143.4	500.	8.24	34.62	26.96	119.5	0.990
266.	10.23	34.72	0.45	2.42	26.71	139.8	600.	7.30	34.57	27.06	110.6	1.106
290.	10.03	34.72	0.43	2.27	26.75	136.9	700.	6.48	34.55	27.16	101.8	1.213
386.	9.23	34.68	0.51	2.41	26.84	129.5	800.	5.76	34.55	27.25	93.5	1.312
483.	8.40	34.63	0.31	2.55	26.94	121.1	1000.	4.65	34.56	27.39	80.3	1.488
580.	7.48	34.58	0.35	2.60	27.04	112.5	1200.	3.90	34.58	27.49	71.4	1.642
775.	5.93	34.55	0.61	3.08	27.23	95.5						
969.	4.78	34.56	0.96	2.73	27.37	81.9						
1164.	4.09	34.58	1.33	2.81	27.46	73.6						
1461.	3.27	34.61	1.72	3.00	27.57	63.5						

CROMWELL 14, STATION 8, 11-32N LAT, 154- 1W LONG, MAR. 13, 1965, 0200 G.C.T.
DRY BULB 25.6 WET BULB 22.1 WIND SPEED 14, DIR. 08 BAR. 13 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.76	34.50	5.22	0.32	22.75	511.1	0.	25.76	34.50	22.75	511.1	0.000
11.	25.53	34.50	4.77	0.35	22.82	504.7	10.	25.54	34.50	22.82	505.1	0.051
30.Δ	25.47	34.50			22.84	503.7	20.	25.47	34.50	22.84	503.4	0.102
50.Δ	25.46	34.50			22.84	504.2	30.	25.47	34.50	22.84	503.7	0.153
52.	25.46	34.51	4.97	0.34	22.85	503.6	50.	25.46	34.50	22.84	504.2	0.254
75.Δ	21.00	34.52			24.15	380.5	75.	21.00	34.52	24.15	380.5	0.366
78.	16.10	34.47	4.01	1.98	25.34	267.1	100.	12.80	34.45	26.03	201.7	0.439
100.Δ	12.80	34.45			26.03	201.7	150.	11.52	34.76	26.51	157.0	0.529
102.	12.51	34.46	1.51	1.51	26.11	194.1	200.	10.93	34.75	26.61	148.0	0.606
127.	11.87	34.73	0.32	2.57	26.42	164.6	250.	10.42	34.74	26.70	141.1	0.679
154.	11.48	34.75	0.59	2.24	26.51	156.7	300.	9.96	34.71	26.75	136.7	0.749
179.	11.21	34.75	0.50	2.69	26.56	152.5	400.	9.35	34.68	26.83	130.6	0.884
205.	10.86	34.75	0.50	2.75	26.63	147.0	500.	8.56	34.64	26.92	123.5	1.012
230.	10.62	34.74	0.59	2.73	26.66	144.1	600.	7.48	34.58	27.04	113.2	1.132
254.	10.38	34.74	0.55	2.53	26.70	140.6	700.	6.57	34.55	27.14	103.3	1.241
280.	10.03	34.71	0.49	2.59	26.73	138.3	800.	5.85	34.55	27.24	94.9	1.341
306.	9.93	34.71	0.44	2.67	26.76	136.3	1000.	4.91	34.56	27.36	84.1	1.522
407.	9.30	34.68	0.40	2.74	26.84	130.2	1200.	4.15	34.58	27.46	74.8	1.683
510.	8.47	34.63	0.32	2.48	26.93	122.6	1500.	3.37	34.60	27.56	65.2	1.896
610.	7.37	34.57	0.47	3.17	27.05	112.1						
812.	5.78	34.55	1.08	3.24	27.25	94.0						
1015.	4.86	34.56	0.81		27.36	83.4						
1215.	4.10	34.58	1.29	2.82	27.46	74.1						
1518.	3.28	34.61	1.52	2.78	27.56	64.8						

ΔFROM BT DATA

Table 1.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					

CROMWELL 14, STATION 9, 12-58N LAT, 153-56W LONG, MAR. 13, 1965, 1200 G.C.T.
DRY BULB 24.4 WET BULB 21.6 WIND SPEED 07, DIR. 07 BAR. 14 WEATHER 03 VIS. 7 CLOUD TYPE 8, COVER 4

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.11	34.38	5.20		22.86	500.7	0.	25.11	34.38	22.86	500.7	0.000
9.	25.13	34.38	5.12	0.54	22.86	501.6	10.	25.13	34.38	22.86	501.5	0.050
30.Δ	25.00	34.38			22.89	498.7	20.	25.07	34.38	22.87	500.3	0.101
48.	24.97	34.37	5.05	0.43	22.90	499.2	30.	25.00	34.38	22.89	498.7	0.151
72.	22.37	34.49	4.98	0.48	23.75	419.7	50.	24.86	34.38	22.94	495.4	0.251
97.	16.98	34.55	4.16	0.86	25.19	281.4	75.	21.75	34.51	23.93	401.1	0.364
120.	13.51	34.34	3.48	1.43	25.80	274.0	100.	16.45	34.53	25.30	271.4	0.449
144.	11.20	34.26	3.05	1.72	26.18	187.5	150.	10.95	34.27	26.24	182.4	0.563
169.	10.56	34.35	2.01	2.04	26.37	170.4	200.	10.07	34.45	26.53	155.3	0.648
194.	10.21	34.45	1.44	2.56	26.51	157.7	250.	9.67	34.56	26.69	141.7	0.723
216.	9.74	34.46	1.19	1.86	26.59	149.7	300.	9.18	34.58	26.78	133.2	0.793
240.	9.73	34.55	0.74	2.56	26.67	143.4	400.	8.36	34.60	26.92	121.3	0.921
266.	9.54	34.57	0.51	2.29	26.71	139.4	500.	7.32	34.55	27.04	111.3	1.038
290.	9.27	34.58	0.46	2.29	26.77	134.8	600.	6.35	34.50	27.13	102.7	1.147
385.	8.50	34.60	0.40	2.47	26.90	123.0	700.	5.74	34.51	27.22	95.1	1.247
481.	7.53	34.56	0.51		27.02	113.1	800.	5.31	34.53	27.29	88.8	1.340
579.	6.51	34.50	0.59	2.44	27.11	104.5	1000.	4.56	34.55	27.39	79.9	1.510
772.	5.43	34.53	0.77	2.53	27.27	90.3	1200.	3.91	34.57	27.48	72.1	1.664
967.	4.68	34.55	1.04	2.50	27.38	81.3						
1161.	4.03	34.57	1.40	2.60	27.46	73.5						
1457.	3.21	34.60	1.81	2.69	27.57	63.5						

CROMWELL 14, STATION 10, 14-28N LAT, 153-57W LONG, MAR. 13, 1965, 2100 G.C.T.
DRY BULB 24.4 WET BULB 21.4 WIND SPEED 08, DIR. 04 BAR. 15 WEATHER 03 VIS. 8 CLOUD TYPE 5, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
1.	25.23	34.28	5.07		22.75	511.4	0.	25.23	34.28	22.75	511.4	0.000
10.	25.10	34.28	5.09	0.22	22.79	508.0	10.	25.10	34.28	22.79	508.0	0.051
30.Δ	25.07	34.31			22.82	505.7	20.	25.07	34.29	22.81	506.3	0.102
52.	25.04	34.31	5.02	0.30	22.83	505.7	30.	25.07	34.31	22.82	505.7	0.153
78.	25.02	34.32	5.03	0.42	22.84	505.4	50.	25.04	34.31	22.83	505.7	0.255
103.	19.83	34.79	5.17	0.34	24.67	332.1	75.	25.16	34.31	22.79	510.4	0.383
128.	17.41	34.71	4.38	0.71	25.21	280.6	100.	20.51	34.74	24.44	353.2	0.492
155.	14.30	34.39	3.47	1.07	25.67	237.1	150.	14.87	34.45	25.59	244.5	0.643
179.	12.18	34.34	2.21	1.79	26.06	200.2	200.	10.81	34.27	26.26	181.3	0.750
205.	10.57	34.26	2.58		26.30	178.0	250.	9.57	34.41	26.58	151.4	0.834
231.	10.10	34.35	1.92	2.39	26.45	164.0	300.	8.91	34.48	26.75	136.5	0.906
254.	9.46	34.42	1.27	1.83	26.61	148.9	400.	8.01	34.53	26.92	121.3	1.036
281.	9.12	34.48	0.74	2.55	26.71	139.6	500.	7.11	34.53	27.06	109.4	1.153
306.	8.85	34.48	0.60	2.52	26.76	135.8	600.	6.43	34.53	27.15	101.4	1.259
407.	7.95	34.53	0.47	2.91	26.93	120.2	700.	5.80	34.53	27.23	94.4	1.358
509.	7.03	34.53	0.60	2.95	27.07	108.5	800.	5.24	34.53	27.30	88.1	1.450
611.	6.36	34.53	0.72	2.82	27.16	100.7	1000.	4.44	34.55	27.40	78.8	1.619
813.	5.17	34.53	0.60	3.09	27.30	87.4	1200.	3.76	34.58	27.50	70.0	1.770
1015.	4.39	34.55	1.12	2.98	27.41	78.1	1500.	2.98	34.61	27.60	60.4	1.968
1219.	3.70	34.58	2.61	3.23	27.50	69.2						
1522.	2.93	34.61	1.97	3.40	27.60	59.8						

TEMPERATURE ERROR TERM AT 100. METERS IS 0.14

CROMWELL 14, STATION 11, 16- ON LAT, 153-58W LONG, MAR. 14, 1965, 0700 G.C.T.
DRY BULB 24.4 WET BULB 21.4 WIND SPEED 07, DIR. 02 BAR. 14 WEATHER 01 VIS. 7 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.12	34.02	5.23		22.89	498.3	0.	24.12	34.02	22.89	498.3	0.000
9.	24.06	34.00	5.31	0.78	22.89	498.4	10.	24.06	34.00	22.89	498.3	0.050
49.	23.98	34.00	5.16	0.50	22.91	497.6	20.	24.02	33.99	22.90	498.1	0.100
76.	23.97	34.00	5.13	1.00	22.92	498.4	30.	23.99	33.99	22.90	497.9	0.151
100.	22.27	34.52	5.13	0.69	23.80	414.9	50.	24.00	33.99	22.90	498.5	0.251
125.	19.68	34.82	4.90	0.55	24.73	327.0	75.	23.99	33.99	22.91	499.2	0.377
151.	15.99	34.53	4.42	0.99	25.41	262.5	100.	22.27	34.52	23.80	414.9	0.492
174.	13.16	34.26	3.31	1.45	25.81	224.5	150.	16.14	34.55	25.39	264.5	0.663
201.	11.82	34.27	2.99	1.80	26.08	199.2	200.	11.85	34.27	26.07	200.0	0.780
224.	11.01	34.33	2.15	1.94	26.27	180.9	250.	10.14	34.34	26.43	165.7	0.872
249.	10.16	34.34	1.90	2.03	26.43	166.2	300.	9.25	34.41	26.64	147.2	0.951
275.	9.75	34.41	1.48	2.08	26.55	154.8	400.	7.96	34.43	26.85	127.6	1.090
299.	9.27	34.41	1.15	2.58	26.63	147.5	500.	7.15	34.46	26.99	115.3	1.212
397.	7.99	34.43	0.77	2.88	26.85	128.0	600.	6.33	34.47	27.11	104.4	1.323
497.	7.18	34.46	0.48	3.05	26.99	115.6	700.	5.70	34.49	27.21	96.3	1.425
595.	6.36	34.47	0.49	3.17	27.11	104.9	800.	5.19	34.50	27.28	89.6	1.519
792.	5.23	34.50	0.67	2.79	27.27	90.1	1000.	4.32	34.53	27.40	78.5	1.689
987.	4.37	34.53	0.93	3.75	27.40	79.1	1200.	3.70	34.56	27.49	70.7	1.840
1184.	3.77	34.55	1.09	3.25	27.47	72.0						
1481.	3.11	34.60	1.65	3.34	27.58	62.4						

ΔFROM BT DATA

Table 1.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
CROMWELL 14, STATION 12, 17-30N LAT, 153-58W LONG, MAR. 14, 1965, 1600 G.C.T. DRY BULB 22.9 WET BULB 21.0 WIND SPEED 05, DIR. 34 BAR. 12 WEATHER 02 VIS. 6 CLOUD TYPE 8, COVER 2												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.79	34.45	5.23		23.31	458.0	0.	23.79	34.45	23.31	458.0	0.000
10.	23.90	34.46	5.41	0.26	23.28	460.7	10.	23.90	34.46	23.28	460.7	0.046
30.Δ	23.78	34.61			23.43	447.3	20.	23.88	34.52	23.33	456.2	0.092
51.	23.45	34.85	4.75	0.13	23.71	421.6	30.	23.78	34.61	23.43	447.3	0.138
77.	23.01	35.10	5.21	0.38	24.03	392.4	50.	23.47	34.84	23.70	422.9	0.226
101.	21.61	35.20	4.97	0.29	24.50	348.2	75.	23.06	35.08	24.00	394.9	0.329
127.	20.36	35.14	4.73	0.53	24.79	321.1	100.	21.68	35.20	24.48	350.0	0.422
152.	18.07	34.80	4.37	0.73	25.12	290.3	150.	18.26	34.83	25.10	292.6	0.584
177.	16.56	34.69	4.74	0.56	25.40	264.3	200.	14.43	34.42	25.67	238.5	0.718
202.	14.24	34.40	4.41	0.84	25.69	236.5	250.	11.36	34.20	26.11	197.1	0.828
227.	12.63	34.26	4.41	0.98	25.91	215.7	300.	9.60	34.20	26.42	168.2	0.920
252.	11.27	34.20	3.83	1.39	26.12	195.7	400.	8.46	34.37	26.73	139.4	1.075
278.	10.48	34.21	3.37	1.55	26.27	181.8	500.	7.36	34.42	26.93	121.3	1.207
303.	9.48	34.20	3.13	1.74	26.43	166.4	600.	6.54	34.44	27.06	109.6	1.324
403.	8.46	34.38	1.09	3.50	26.74	138.9	700.	5.76	34.45	27.17	99.8	1.429
506.	7.30	34.42	0.80	2.58	26.94	120.4	800.	5.13	34.46	27.25	92.0	1.526
605.	6.50	34.44	0.67	2.76	27.07	109.2	1000.	4.68	34.54	27.37	82.7	1.703
806.	5.10	34.46	1.03	2.72	27.26	91.6	1200.	3.86	34.56	27.47	72.4	1.860
1008.	4.67	34.54	1.03	2.90	27.37	82.4	1500.	3.07	34.59	27.57	62.8	2.066
1208.	3.82	34.56	1.22	2.91	27.48	72.0						
1510.	3.04	34.59	1.61	2.68	27.58	62.5						

CROMWELL 14, STATION 13, 18-58N LAT, 153-56W LONG, MAR. 15, 1965, 0300 G.C.T. DRY BULB 22.6 WET BULB 19.7 WIND SPEED 16, DIR. 01 BAR. 12 WEATHER 02 VIS. 8 CLOUD TYPE 5, COVER 5												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.59	34.47	5.21		23.38	450.9	0.	23.59	34.47	23.38	450.9	0.000
9.	23.42	34.49	5.25	0.35	23.45	445.1	10.	23.39	34.49	23.46	444.1	0.045
30.Δ	22.94	34.58			23.65	426.2	20.	23.15	34.54	23.56	434.6	0.089
47.	22.89	34.62	5.25	0.27	23.70	422.5	30.	22.94	34.58	23.65	426.2	0.133
73.	23.03	35.03	5.21	0.24	23.97	397.8	50.	22.92	34.66	23.72	420.4	0.218
97.	22.40	35.17	4.92	0.34	24.25	371.4	75.	22.99	35.05	23.99	395.6	0.321
120.	21.72	35.21	5.20	0.29	24.48	351.1	100.	22.32	35.18	24.28	368.6	0.417
145.	20.77	35.15	4.86	0.30	24.69	331.5	150.	20.53	35.14	24.75	326.2	0.592
170.	19.48	35.08	4.76		24.98	304.8	200.	17.61	34.82	25.25	279.1	0.745
193.	18.18	34.91	4.70		25.18	286.3	250.	12.85	34.27	25.87	220.2	0.870
217.	16.00	34.60	5.07		25.46	259.6	300.	10.84	34.17	26.18	191.2	0.974
242.	13.35	34.31	4.84		25.81	226.3	400.	8.91	34.41	26.69	143.3	1.143
267.	12.08	34.21	4.59	1.14	25.98	210.0	500.	7.82	34.46	26.89	125.4	1.279
289.	11.18	34.16			26.11	197.9	600.	6.62	34.46	27.07	109.2	1.397
386.	9.09	34.40	4.75	2.52	26.65	147.0	700.	5.42	34.42	27.19	97.6	1.502
483.	8.02	34.45	0.59	3.32	26.86	128.5	800.	4.60	34.40	27.27	89.5	1.596
579.	6.90	34.47	0.45	4.07	27.04	112.2	1000.	4.25	34.52	27.40	78.6	1.766
772.	4.71	34.39	1.06	3.07	27.25	91.5	1200.	3.76	34.57	27.49	70.7	1.917
967.	4.34	34.51	0.96	3.36	27.38	80.0						
1161.	3.81	34.54	1.29	2.85	27.46	73.0						
1457.	3.10	34.59	1.63		27.57	62.9						

CROMWELL 14, STATION 14, 20-32N LAT, 153-57W LONG, MAR. 15, 1965, 1400 G.C.T. DRY BULB 21.2 WET BULB 17.5 WIND SPEED 16, DIR. 04 BAR. 15 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 1												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.88	34.59	5.39		23.68	422.7	0.	22.88	34.59	23.68	422.7	0.000
9.	22.90	34.60	5.29	0.28	23.68	422.8	10.	22.90	34.61	23.69	422.1	0.043
47.	22.58	35.04	5.27	0.22	24.10	383.8	20.	22.87	34.72	23.78	413.8	0.085
70.	22.13	35.07	5.29	0.39	24.25	370.3	30.	22.80	34.83	23.89	403.9	0.126
92.	21.93	35.12	5.23	0.16	24.35	362.2	50.	22.52	35.05	24.13	381.7	0.205
116.	21.54	35.18	5.30	0.18	24.50	348.4	75.	22.08	35.08	24.28	368.5	0.299
140.	20.53	35.16	4.92	0.30	24.76	324.4	100.	21.84	35.14	24.39	358.5	0.391
162.	19.63	35.07	4.89	0.34	24.93	308.9	150.	20.14	35.13	24.84	317.2	0.561
185.	18.32	34.90	4.19	0.56	25.13	290.1	200.	17.25	34.76	25.29	275.8	0.711
208.	16.67	34.68	4.69	0.53	25.37	268.5	250.	14.07	34.38	25.71	236.1	0.840
232.	15.28	34.51	4.72	0.63	25.55	251.0	300.	10.95	34.11	26.11	197.5	0.949
255.	13.72	34.34	4.78	0.80	25.75	231.8	400.	7.83	34.07	26.59	152.5	1.126
278.	12.09	34.18	4.78	1.06	25.95	212.7	500.	6.15	34.09	26.84	128.9	1.268
370.	8.55	34.08	3.38	2.07	26.49	161.9	600.	5.20	34.21	27.05	109.1	1.388
464.	6.70	34.07	1.87	2.70	26.75	137.2	700.	4.81	34.37	27.22	93.8	1.490
556.	5.48	34.14	1.32	3.36	26.96	117.2	800.	4.53	34.47	27.33	83.7	1.580
742.	4.75	34.43	0.95	2.39	27.27	88.7	1000.	3.91	34.52	27.44	74.3	1.740
928.	4.10	34.51	1.19	3.14	27.41	76.7	1200.	3.40	34.56	27.52	67.1	1.883
1114.	3.64	34.53	1.30	3.19	27.47	71.3						
1398.	3.00	34.58	1.83	3.12	27.57	62.0						

ΔFROM BT DATA

Table 1.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 14, STATION 15, 21-58N LAT, 154- 0W LONG, MAR. 15, 1965, 2200 G.C.T.
DRY BULB 22.4 WET BULB 17.3 WIND SPEED 18, DIR. 06 BAR. 19 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.48	34.93	5.37		24.05	387.2	0.	22.48	34.93	24.05	387.2	0.000
7.	22.50	34.95	5.28	0.58	24.06	386.6	10.	22.49	34.96	24.07	385.6	0.039
40.Δ	22.40	35.07	5.36	0.30	24.18	376.5	20.	22.47	35.00	24.11	382.5	0.078
50.Δ	22.40	35.08			24.19	376.1	30.	22.44	35.04	24.14	379.4	0.116
61.	21.73	35.22	5.25	0.28	24.48	348.5	50.	22.40	35.08	24.19	376.1	0.192
82.	21.37	35.22	5.05	0.36	24.58	339.8	75.	21.42	35.24	24.58	339.3	0.282
101.	21.15	35.21	5.08	0.41	24.63	335.4	100.	21.17	35.21	24.63	335.8	0.367
121.	20.41	35.19	4.97	0.32	24.82	318.5	150.	19.34	35.11	25.04	298.1	0.527
141.	19.52	35.13	4.90	0.44	25.01	301.1	200.	16.27	34.67	25.45	260.0	0.668
174.	18.21	34.94	4.88	0.56	25.19	284.2	250.	12.78	34.29	25.91	216.8	0.788
183.	17.19	34.78	5.05	0.59	25.32	272.2	300.	10.46	34.13	26.21	187.8	0.890
203.	16.15	34.66	4.92	1.17	25.47	258.2	400.	8.21	34.15	26.60	152.0	1.061
224.	14.39	34.44	5.07	0.83	25.69	237.3	500.	5.98	34.10	26.86	126.2	1.202
244.	13.12	34.32	5.09		25.86	221.1	600.	4.93	34.22	27.08	105.2	1.319
325.	9.63	34.10	4.56	1.49	26.33	176.6	700.	4.58	34.36	27.24	91.2	1.418
408.	8.10	34.16	2.54	2.41	26.62	149.8	800.	4.42	34.44	27.32	84.3	1.507
492.	6.10	34.09	2.09	2.64	26.84	128.1	1000.	3.89	34.52	27.44	74.1	1.667
658.	4.70	34.32	0.64	3.35	27.19	95.4	1200.	3.44	34.57	27.52	66.6	1.809
828.	4.40	34.46	1.04	2.99	27.34	83.1						
1002.	3.88	34.52	1.28	2.95	27.44	74.0						
1279.	3.24	34.57	1.52	2.50	27.54	64.8						

TEMPERATURE ERROR TERM AT 150. METERS IS 0.13

CROMWELL 14, STATION 16, 23-29N LAT, 153-56W LONG, MAR. 16, 1965, 0800 G.C.T.
DRY BULB 19.9 WET BULB 16.0 WIND SPEED 19, DIR. 07 BAR. 18 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	21.10	35.22	5.44		24.65	329.7	0.	21.10	35.22	24.65	329.7	0.000
9.	21.10	35.22	5.59	0.36	24.65	330.0	10.	21.10	35.22	24.65	330.0	0.033
50.	20.94	35.23	5.39	0.31	24.70	326.7	20.	21.08	35.22	24.66	329.7	0.066
75.	20.74	35.22	5.45	0.22	24.75	323.1	30.	21.05	35.23	24.67	329.0	0.100
99.	20.41	35.18	5.36	0.27	24.81	318.4	50.	20.94	35.23	24.70	326.7	0.166
124.	19.43	35.10	5.06	0.37	25.01	300.5	75.	20.74	35.22	24.75	323.1	0.248
149.	18.60	34.99	4.89	0.46	25.13	289.0	100.	20.38	35.18	24.82	317.8	0.328
173.	17.20	34.77	5.12	0.48	25.31	272.9	150.	18.55	34.98	25.14	288.4	0.481
199.	15.78	34.60	5.41	0.61	25.51	254.3	200.	15.72	34.59	25.52	253.6	0.618
224.	14.31	34.41		0.76	25.68	237.8	250.	12.88	34.28	25.87	219.9	0.737
248.	12.95	34.28	5.01	0.91	25.86	220.9	300.	11.05	34.17	26.14	195.0	0.842
273.	12.21	34.25	5.09	1.07	25.99	209.6	400.	8.29	34.04	26.50	161.4	1.021
297.	11.16	34.18	5.17	1.12	26.13	196.2	500.	5.96	34.06	26.84	128.3	1.168
397.	8.37	34.04	4.24	1.86	26.49	162.5	600.	4.94	34.19	27.06	107.5	1.287
496.	6.02	34.06	2.04	2.66	26.83	129.3	700.	4.52	34.32	27.21	93.5	1.388
595.	4.97	34.18	0.91	3.14	27.05	108.4	800.	4.36	34.43	27.32	84.2	1.478
794.	4.37	34.43	0.98	2.81	27.32	84.6	1000.	3.89	34.51	27.43	74.7	1.639
993.	3.91	34.51	1.18	3.27	27.43	75.0	1200.	3.43	34.56	27.51	67.5	1.783
1193.	3.42	34.55	1.51	3.32	27.51	67.8						
1492.	2.82	34.58	1.76	3.47	27.59	60.5						

CROMWELL 14, STATION 17, 23-28N LAT, 151- 1W LONG, MAR. 17, 1965, 0000 G.C.T.
DRY BULB 22.4 WET BULB 17.4 WIND SPEED 20, DIR. 34 BAR. 17 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.62	34.47			23.66	424.3	0.	22.62	34.47	23.66	424.3	0.000
9.	22.64	34.47			23.66	425.1	10.	22.64	34.47	23.66	425.2	0.043
30.Δ	22.65	34.47			23.65	426.2	20.	22.65	34.47	23.65	426.0	0.086
48.	22.60	34.48			23.67	424.8	30.	22.65	34.47	23.65	426.2	0.129
72.	22.18	34.99			24.18	377.5	50.	22.58	34.52	23.71	421.4	0.214
96.	21.39	35.03			24.43	354.5	75.	22.08	35.01	24.22	373.8	0.314
121.	21.15	35.18			24.61	338.3	100.	21.34	35.05	24.46	351.6	0.405
145.	20.65	35.20			24.76	324.8	150.	20.38	35.18	24.82	319.1	0.574
169.	19.24	35.09			25.05	298.1	200.	17.80	34.87	25.24	280.2	0.726
193.	18.22	34.94			25.19	285.0	250.	14.25	34.42	25.70	237.0	0.856
217.	16.63	34.70			25.39	266.4	300.	11.66	34.22	26.07	202.1	0.967
241.	14.69	34.46			25.64	242.5	400.	8.23	34.07	26.53	158.3	1.148
266.	13.57	34.36			25.80	227.7	500.	6.76	34.11	26.77	135.6	1.297
289.	12.22	34.26			25.99	209.5	600.	5.27	34.15	26.99	114.6	1.423
384.	8.54	34.07			26.48	162.7	700.	4.66	34.28	27.16	98.5	1.531
481.	7.10	34.11			26.73	140.1	800.	4.42	34.40	27.29	87.3	1.625
577.	5.48	34.12			26.94	119.0	1000.	3.93	34.49	27.41	76.5	1.790
769.	4.52	34.38			27.26	89.9	1200.	3.47	34.56	27.51	68.0	1.937
962.	4.02	34.48			27.39	78.3						
1156.	3.57	34.54			27.49	70.1						
1451.	2.96	34.60			27.59	60.4						

ΔFROM BT DATA

Table 1.--Continued

CROMWELL 14, STATION 19, 22- 1N LAT, 151- 0W LONG, MAR. 17, 1965, 0900 G.C.T.
DRY BULB 21.7 WET BULB 18.0 WIND SPEED 17, DIR. 34 BAR. 18 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.25	34.60			23.58	432.1	0.	23.25	34.60	23.58	432.1	0.000
9.Δ	23.25	34.60			23.58	432.4	10.	23.25	34.60	23.58	432.6	0.044
30.Δ	23.24	34.62			23.60	431.5	20.	23.25	34.60	23.58	432.9	0.087
48.	23.20	34.76			23.71	421.0	30.	23.24	34.62	23.60	431.5	0.131
72.Δ	23.25	34.95			23.84	409.6	50.	23.20	34.78	23.73	419.8	0.216
75.Δ	23.25	34.96			23.85	409.0	75.	23.25	34.96	23.85	409.0	0.321
93.	22.31	35.09			24.22	374.6	100.	22.03	35.14	24.33	364.0	0.418
120.	21.22	35.21			24.61	338.0	150.	19.63	35.11	24.96	305.7	0.587
145.	19.84	35.13			24.92	309.3	200.	16.45	34.66	25.40	264.7	0.731
169.	18.74	34.99			25.10	293.1	250.	12.73	34.22	25.86	221.3	0.853
193.	17.02	34.74			25.33	271.6	300.	10.44	34.10	26.20	189.3	0.957
217.	15.05	34.47			25.57	248.6	400.	7.45	34.07	26.64	146.8	1.126
242.	13.27	34.26			25.78	228.4	500.	6.43	34.20	26.89	124.5	1.263
266.	11.78	34.16			26.00	208.1	600.	5.70	34.36	27.11	104.4	1.379
289.	10.89	34.12			26.13	195.5	700.	5.40	34.46	27.22	94.3	1.479
385.	7.70	34.06			26.60	150.9	800.	5.18	34.51	27.29	89.1	1.572
482.	6.61	34.17			26.84	128.9	1000.	4.42	34.52	27.38	80.9	1.744
578.	5.79	34.33			27.07	107.4	1200.	3.81	34.54	27.46	73.2	1.900
768.	5.30	34.50			27.27	90.8						
961.	4.55	34.51			27.36	82.6						
1152.	3.96	34.54			27.45	74.8						
1441.	3.22	34.58			27.55	65.0						

CROMWELL 14, STATION 19, 20-31N LAT, 150-56W LONG, MAR. 17, 1965, 1800 G.C.T.
DRY BULB 22.8 WET BULB 18.3 WIND SPEED 18, DIR. 32 BAR. 18 WEATHER 02 VIS. 8 CLOUD TYPE 2, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.50	34.50			23.43	446.2	0.	23.50	34.50	23.43	446.2	0.000
9.	23.50	34.49			23.42	447.3	10.	23.50	34.49	23.42	447.4	0.045
50.	23.55	34.67			23.54	437.3	20.	23.53	34.50	23.43	447.6	0.090
75.	23.42	34.96			23.80	413.7	30.	23.54	34.54	23.45	445.9	0.135
99.	22.64	35.10			24.13	383.1	50.	23.55	34.67	23.54	437.3	0.224
124.	21.39	35.13			24.51	348.3	75.	23.42	34.96	23.80	413.7	0.331
150.	20.27	35.13			24.81	320.3	100.	22.59	35.10	24.15	381.6	0.431
173.	19.56	35.08			24.96	306.9	150.	20.27	35.13	24.81	320.3	0.608
198.	18.45	34.95			25.14	290.0	200.	18.29	34.92	25.16	288.2	0.762
223.	16.27	34.59			25.39	266.5	250.	14.12	34.35	25.68	239.0	0.895
247.	14.34	34.37			25.65	242.0	300.	11.25	34.18	26.11	198.3	1.005
271.	12.71	34.24			25.88	219.8	400.	8.13	34.20	26.65	147.1	1.179
295.	11.47	34.18			26.07	201.7	500.	6.43	34.24	26.92	121.5	1.315
391.	8.35	34.20			26.61	150.3	600.	5.80	34.35	27.09	106.1	1.430
489.	6.54	34.23			26.90	123.6	700.	5.29	34.42	27.21	95.5	1.531
585.	5.89	34.34			27.07	108.0	800.	4.89	34.47	27.29	88.2	1.624
777.	4.97	34.46			27.27	89.6	1000.	4.33	34.53	27.40	79.1	1.794
972.	4.41	34.52			27.38	80.2	1200.	3.78	34.56	27.48	71.5	1.946
1165.	3.88	34.55			27.46	73.2						
1461.	3.08	34.58			27.56	63.4						

CROMWELL 14, STATION 20, 18-59N LAT, 150-59W LONG, MAR. 18, 1965, 0400 G.C.T.
DRY BULB 22.8 WET BULB 19.2 WIND SPEED 10, DIR. 33 BAR. 16 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 4

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.95	34.47			23.28	461.0	0.	23.95	34.47	23.28	461.0	0.000
10.Δ	23.75	34.46			23.33	456.5	10.	23.75	34.46	23.33	456.5	0.046
20.Δ	23.74	34.47			23.34	455.9	20.	23.74	34.47	23.34	455.9	0.092
52.	23.70	34.53			23.40	451.7	30.	23.73	34.48	23.35	455.3	0.138
78.	23.67	34.68			23.52	441.0	50.	23.70	34.52	23.39	452.1	0.229
103.	23.16	35.05			23.95	401.1	75.	23.69	34.65	23.49	443.2	0.342
128.	20.83	35.01			24.57	342.5	100.	23.28	35.01	23.88	407.2	0.449
155.	20.19	35.17			24.86	315.6	150.	20.25	35.14	24.82	318.7	0.632
180.	19.27	35.04			25.00	302.8	200.	18.42	34.93	25.14	290.5	0.786
205.	18.15	34.90			25.18	286.7	250.	14.37	34.41	25.67	239.8	0.919
231.	15.95	34.59			25.46	259.7	300.	11.16	34.17	26.12	196.7	1.030
256.	13.88	34.36			25.74	233.6	400.	8.60	34.26	26.62	150.2	1.205
282.	11.91	34.21			26.01	207.2	500.	6.48	34.25	26.92	121.2	1.342
307.	10.94	34.17			26.16	193.3	600.	5.84	34.34	27.07	107.5	1.457
409.	8.43	34.27			26.66	146.7	700.	5.38	34.43	27.20	96.3	1.560
512.	6.28	34.25			26.95	118.9	800.	4.86	34.48	27.30	86.8	1.653
614.	5.83	34.36			27.09	106.2	1000.	4.11	34.54	27.43	75.5	1.817
816.	4.78	34.49			27.32	85.4	1200.	3.58	34.57	27.51	68.5	1.963
1018.	4.06	34.54			27.44	74.8	1500.	2.83	34.62	27.62	57.9	2.155
1221.	3.53	34.57			27.51	67.9						
1523.	2.78	34.62			27.62	57.3						

ΔFROM BT DATA

Table 1.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
CROMWELL 14, STATION 21, 17-31N LAT, 151- 4W LONG, MAR. 18, 1965, 1200 G.C.T. DRY BULB 21.7 WET BULB 18.0 WIND SPEED 06, DIR. 08 BAR. 18 WEATHER 02 VIS. 6 CLOUD TYPE 8, COVER 6											
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.85	34.33			23.20	468.3	0.	23.85	34.33	23.20	468.3	0.000
10.	23.86	34.33			23.20	469.0	10.	23.86	34.33	23.20	469.0	0.047
51.	23.80	34.32			23.21	469.6	20.	23.85	34.32	23.19	469.7	0.094
76.	23.83	34.40			23.26	465.6	30.	23.83	34.32	23.19	470.0	0.142
101.	22.06	34.81			24.08	388.4	50.	23.80	34.32	23.21	469.6	0.236
125.	20.94	34.89			24.45	354.0	75.	23.85	34.39	23.25	466.5	0.354
152.	20.14	35.04			24.77	323.6	100.	22.14	34.79	24.04	391.7	0.462
176.	18.22	34.80			25.08	294.6	150.	20.22	35.04	24.75	325.8	0.643
201.	17.00	34.72			25.32	272.8	200.	17.05	34.72	25.31	273.7	0.794
226.	15.08	34.50			25.59	247.3	250.	13.22	34.31	25.83	224.2	0.920
251.	13.14	34.30			25.84	223.2	300.	10.12	34.15	26.29	180.5	1.022
276.	11.04	34.17			26.14	194.4	400.	8.33	34.28	26.68	144.4	1.186
301.	10.09	34.15			26.29	180.1	500.	7.11	34.38	26.94	120.7	1.320
401.	8.32	34.28			26.68	144.1	600.	5.95	34.36	27.08	107.5	1.435
502.	7.09	34.38			26.94	120.3	700.	5.27	34.39	27.18	97.8	1.539
602.	5.93	34.36			27.08	107.3	800.	4.86	34.44	27.27	90.0	1.633
801.	4.86	34.44			27.27	90.0	1000.	4.29	34.52	27.40	79.0	1.805
1003.	4.28	34.52			27.40	78.9	1200.	3.74	34.56	27.48	71.0	1.956
1203.	3.73	34.56			27.49	70.9	1500.	2.99	34.60	27.59	61.1	2.157
1504.	2.98	34.60			27.59	61.0	2000.	2.17	34.64	27.69	51.0	2.442
2044.	2.12	34.64			27.70	50.4	2500.	1.78	34.67	27.74	45.9	2.689
2548.	1.76	34.67			27.75	45.6	3000.	1.63	34.68	27.77	44.6	2.920
3049.	1.62	34.68			27.77	44.7	4000.	1.42	34.65	27.76	46.3	3.386
4040.	1.42	34.65			27.76	46.5						

CROMWELL 14, STATION 22, 15-59N LAT, 151- 3W LONG, MAR. 18, 1965, 2200 G.C.T. DRY BULB 23.1 WET BULB 20.2 WIND SPEED 08, DIR. 09 BAR. 17 WEATHER 03 VIS. 8 CLOUD TYPE 8, COVER 7												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.12	34.20			23.02	485.3	0.	24.12	34.20	23.02	485.3	0.000
9.Δ	23.86	34.19			23.09	479.0	10.	23.85	34.19	23.10	478.7	0.049
30.Δ	23.78	34.21			23.13	476.1	20.	23.77	34.20	23.12	476.6	0.097
49.	23.68	34.23			23.17	472.6	30.	23.78	34.21	23.13	476.1	0.145
76.	23.72	34.48			23.35	456.7	50.	23.69	34.23	23.17	472.7	0.240
99.	22.46	34.92			24.05	391.1	75.	23.73	34.47	23.34	458.0	0.357
123.	20.61	34.99			24.61	338.1	100.	22.38	34.93	24.08	388.5	0.464
148.	19.14	34.92			24.94	307.2	150.	19.05	34.91	24.96	305.7	0.639
173.	17.48	34.72*			25.20	282.9	200.	13.73	34.30	25.73	233.1	0.775
198.	13.94	34.32			25.69	236.1	250.	10.89	34.32	26.28	180.3	0.879
222.	11.90	34.22			26.02	204.9	300.	10.80	34.66	26.56	155.0	0.964
246.	10.87	34.27			26.25	183.4	400.	9.36	34.61	26.78	135.9	1.110
272.	11.16	34.58			26.44	166.3	500.	8.19	34.55	26.91	124.3	1.242
295.	10.87	34.65			26.55	156.6	600.	7.42	34.53	27.01	115.9	1.363
393.	9.46	34.62			26.77	137.0	700.	6.49	34.50	27.12	105.8	1.475
492.	8.26	34.55			26.90	124.9	800.	5.65	34.49	27.22	96.5	1.577
590.	7.52	34.53			27.00	116.9	1000.	4.72	34.52	27.35	84.2	1.760
786.	5.74	34.49			27.20	97.5	1200.	3.97	34.55	27.45	74.5	1.921
985.	4.78	34.52			27.34	84.0						
1182.	4.06	34.55			27.44	75.5						
1483.	3.16	34.59			27.57	63.8						

CROMWELL 14, STATION 23, 14-30N LAT, 151- 1W LONG, MAR. 19, 1965, 0700 G.C.T. DRY BULB 24.0 WET BULB 17.0 WIND SPEED 15, DIR. 03 BAR. 17 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 5												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.83	34.15			22.77	509.1	0.	24.83	34.15	22.77	509.1	0.000
9.	24.87	34.15			22.76	510.6	10.	24.87	34.15	22.76	510.7	0.051
50.	24.71	34.16			22.82	506.9	20.	24.83	34.14	22.76	510.9	0.103
77.	24.84	34.33			22.91	499.5	30.	24.80	34.14	22.77	510.4	0.154
100.	21.04	34.52			24.14	382.4	50.	24.71	34.16	22.82	506.9	0.257
124.	17.06	34.51			25.14	287.0	75.	24.91	34.31	22.87	502.6	0.384
151.	14.02	34.29			25.65	238.7	100.	21.04	34.52	24.14	382.4	0.495
175.	12.23	34.24			25.97	208.3	150.	14.11	34.30	25.64	239.8	0.652
200.	11.61	34.41			26.22	185.1	200.	11.61	34.41	26.22	185.1	0.759
224.	11.14	34.57			26.43	165.6	250.	10.81	34.62	26.54	156.5	0.845
248.	10.82	34.62			26.53	156.8	300.	10.33	34.65	26.64	147.6	0.922
274.	10.74	34.66			26.58	153.1	400.	8.67	34.52	26.81	131.8	1.063
298.	10.37	34.65			26.63	148.0	500.	7.88	34.55	26.96	119.4	1.190
397.	8.70	34.52			26.81	132.2	600.	6.82	34.50	27.07	109.2	1.305
496.	7.92	34.55			26.95	119.8	700.	5.92	34.49	27.18	98.9	1.410
594.	6.88	34.50			27.06	109.9	800.	5.23	34.50	27.27	90.2	1.506
792.	5.27	34.50			27.27	90.7	1000.	4.58	34.55	27.39	80.2	1.678
991.	4.61	34.55			27.38	80.7	1200.	3.90	34.58	27.49	71.4	1.832
1189.	3.89	34.58			27.49	71.3	1500.	3.05	34.59	27.58	62.5	2.036
1515.	3.01	34.59			27.58	62.2						

ΔFROM BT DATA
*INTERPOLATED DATA

Table 1.--Continued

CROMWELL 14, STATION 24, 13- ON LAT, 151- OW LONG, MAR. 19, 1965, 1700 G.C.T.
DRY BULB 24.3 WET BULB 22.8 WIND SPEED 15, DIR. 06 BAR. 15 WEATHER 03 VIS. 7 CLOUD TYPE 8, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.88	34.14			22.75	511.3	0.	24.88	34.14	22.75	511.3	0.000
10.	24.90	34.13			22.74	513.0	10.	24.90	34.13	22.74	513.0	0.052
50.	24.58	34.14			22.84	504.6	20.	24.90	34.12	22.73	514.0	0.103
75.	23.89	34.25			23.13	478.0	30.	24.84	34.12	22.74	513.0	0.155
99.	17.82	34.55			24.99	300.8	50.	24.58	34.14	22.84	504.6	0.258
123.	14.14	34.31			25.64	238.8	75.	23.89	34.25	23.13	478.0	0.381
147.	11.72	34.28			26.10	195.4	100.	17.63	34.54	25.03	296.9	0.479
171.	11.26	34.53			26.38	169.4	150.	11.61	34.31	26.15	191.4	0.602
197.	10.87	34.63			26.53	155.8	200.	10.80	34.63	26.54	154.6	0.689
220.	10.35	34.62			26.61	148.1	250.	10.04	34.64	26.69	141.8	0.764
244.	10.10	34.64			26.67	143.0	300.	9.15	34.57	26.78	133.6	0.833
269.	9.79	34.64			26.73	138.4	400.	8.11	34.56	26.93	120.4	0.961
293.	9.26	34.58			26.77	134.7	500.	7.23	34.54	27.04	110.5	1.078
390.	8.20	34.56			26.92	121.5	600.	6.38	34.54	27.16	100.0	1.184
488.	7.34	34.54			27.03	111.9	700.	5.69	34.55	27.25	91.7	1.281
584.	6.50	34.54			27.15	101.5	800.	5.15	34.55	27.32	85.4	1.371
779.	5.25	34.55			27.31	86.6	1000.	4.35	34.56	27.42	76.6	1.535
975.	4.44	34.56			27.41	77.6	1200.	3.71	34.58	27.50	69.1	1.682
1170.	3.80	34.58			27.49	70.0						
1466.	3.09	34.61			27.59	61.4						

CROMWELL 14, STATION 25, 11-31N LAT, 150-58W LONG, MAR. 20, 1965, 0200 G.C.T.
DRY BULB 26.6 WET BULB 23.4 WIND SPEED 16, DIR. 08 BAR. 12 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 4

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.36	34.27			22.70	515.9	0.	25.36	34.27	22.70	515.9	0.000
9.	25.28	34.26			22.72	514.6	10.	25.27	34.26	22.72	514.5	0.052
30.Δ	25.10	34.24			22.76	511.6	20.	25.18	34.25	22.74	513.2	0.104
48.	24.96	34.25			22.81	507.6	30.	25.10	34.24	22.76	511.6	0.155
72.	23.84	34.40			23.26	465.7	50.	24.96	34.25	22.81	507.2	0.258
96.	19.14	34.86			24.90	309.8	75.	23.34	34.47	23.46	446.6	0.378
119.	14.88	34.43			25.58	245.2	100.	18.32	34.80	25.06	294.7	0.471
144.	12.47	34.56			26.18	188.6	150.	12.26	34.59	26.24	182.6	0.592
167.	11.98	34.67			26.36	172.0	200.	11.10	34.71	26.55	154.4	0.677
192.	11.40	34.73			26.51	157.7	250.	10.38	34.70	26.68	143.1	0.752
214.	10.64	34.66			26.59	150.0	300.	9.73	34.67	26.76	135.6	0.822
239.	10.50	34.70			26.65	145.2	400.	8.90	34.63	26.87	127.3	0.954
264.	10.19	34.70			26.70	140.5	500.	7.86	34.58	26.98	117.0	1.078
287.	9.86	34.68			26.75	137.0	600.	6.90	34.54	27.09	107.6	1.191
382.	9.08	34.64			26.84	129.1	700.	6.13	34.53	27.19	98.6	1.295
478.	8.09	34.59			26.96	119.2	800.	5.48	34.54	27.28	90.6	1.391
573.	7.13	34.54			27.06	110.2	1000.	4.46	34.56	27.41	78.5	1.562
766.	5.70	34.54			27.25	93.1	1200.	3.80	34.58	27.50	70.0	1.712
959.	4.63	34.55			27.38	80.6	1500.	3.03	34.61	27.59	61.1	1.912
1152.	3.95	34.58			27.48	71.7	2000.	2.24	34.65	27.70	50.7	2.196
1448.	3.14	34.60			27.57	62.6	2500.	1.87	34.67	27.74	46.8	2.445
1937.	2.31	34.65			27.69	51.6	3000.	1.65	34.68	27.77	44.7	2.678
2436.	1.90	34.67			27.74	47.1						
2935.	1.73	34.68			27.76	45.8						
3748.	1.46	34.70			27.79	42.9						

CROMWELL 14, STATION 26, 10- 2N LAT, 147-55W LONG, MAR. 21, 1965, 0100 G.C.T.
DRY BULB 25.7 WET BULB 23.0 WIND SPEED 16, DIR. 09 BAR. 11 WEATHER 03 VIS. 7 CLOUD TYPE 5, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	26.60	34.62	5.03		22.58	527.5	0.	26.60	34.62	22.58	527.5	0.000
10.	26.62	34.61	4.92	0.50	22.57	529.3	10.	26.62	34.61	22.57	529.3	0.053
20.Δ	26.61	34.61			22.57	529.4	20.	26.61	34.61	22.57	529.4	0.107
30.Δ	26.60	34.61			22.57	529.5	30.	26.60	34.61	22.57	529.5	0.160
51.	25.28	34.34	4.88	0.35	22.78	510.5	50.	25.41	34.35	22.75	513.6	0.265
76.	17.74	34.63	4.40	0.75	25.07	292.4	75.	18.08	34.62	24.98	301.2	0.368
100.	13.07	34.40	2.10	1.94	25.93	210.6	100.	13.07	34.40	25.93	210.6	0.432
126.	12.12	34.65	0.20	2.01	26.31	175.0	150.	11.66	34.74	26.47	160.9	0.526
153.	11.62	34.74	0.39	3.04	26.48	159.9	200.	10.83	34.74	26.62	147.1	0.603
176.	11.22	34.74	0.43	2.42	26.55	153.4	250.	10.26	34.72	26.71	139.8	0.676
202.	10.80	34.74	0.64	2.63	26.63	146.6	300.	9.89	34.71	26.76	135.5	0.745
227.	10.48	34.73	0.65	2.37	26.68	142.4	400.	9.24	34.67	26.84	129.8	0.879
252.	10.24	34.72	0.45	2.59	26.71	139.6	500.	8.43	34.63	26.94	121.7	1.006
278.	10.03	34.71	0.48	2.39	26.74	137.4	600.	7.57	34.59	27.04	113.3	1.125
303.	9.87	34.71	0.39	2.63	26.77	135.2	700.	6.65	34.56	27.15	103.4	1.234
402.	9.23	34.67	0.29	2.46	26.84	129.7	800.	5.79	34.55	27.25	93.9	1.334
505.	8.39	34.63	0.31	2.47	26.94	121.3	1000.	4.67	34.56	27.39	80.9	1.511
605.	7.53	34.59	0.60	3.20	27.04	112.9	1200.	3.84	34.59	27.50	70.1	1.663
807.	5.73	34.55	1.00	2.63	27.25	93.2	1500.	3.02	34.61	27.59	60.8	1.863
1009.	4.63	34.56	1.34	2.85	27.39	80.4						
1211.	3.80	34.59	1.74	2.70	27.50	69.6						
1513.	3.00	34.61		3.19	27.60	60.6						

ΔFROM BT DATA

Table 1.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				

CROMWELL 14, STATION 27, 11-30N LAT, 147-58W LONG, MAR. 21, 1965, 1100 G.C.T.
DRY BULB 25.5 WET BULB 21.5 WIND SPEED 21, DIR. 08 BAR. 14 WEATHER 02 VIS. 6 CLOUD TYPE 8, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
1.	25.89	34.36	4.91		22.61	525.0	0.	25.89	34.36	22.61	525.0	0.000
11.	25.94	34.36	4.91	0.16	22.59	526.9	10.	25.94	34.36	22.59	526.8	0.053
30.Δ	25.95	34.36			22.59	528.0	20.	25.99	34.36	22.57	529.1	0.106
52.	25.13	34.43	4.88	0.42	22.89	499.7	30.	25.95	34.36	22.59	528.0	0.159
77.	17.42	34.56	4.15	0.87	25.10	290.1	50.	25.34	34.42	22.82	506.3	0.264
102.	13.04	34.38	2.25	1.99	25.92	211.5	75.	18.11	34.55	24.92	306.4	0.366
127.	12.39	34.69	0.53	2.24	26.29	177.1	100.	13.26	34.39	25.89	214.9	0.432
154.	11.79	34.76	0.36	2.41	26.46	161.6	150.	11.87	34.76	26.45	162.9	0.527
178.	11.44	34.77	0.48	1.99	26.53	155.1	200.	11.10	34.75	26.59	150.7	0.606
204.	11.04	34.75	0.65	2.44	26.59	150.1	250.	10.58	34.74	26.67	143.8	0.680
229.	10.83	34.75	0.60	2.77	26.63	147.0	300.	10.09	34.72	26.74	137.8	0.751
254.	10.53	34.74	0.57	2.86	26.68	143.1	400.	9.39	34.68	26.83	131.4	0.887
280.	10.30	34.74	0.64	2.30	26.72	139.8	500.	8.41	34.63	26.94	121.2	1.014
305.	10.04	34.72	0.50	2.97	26.75	137.4	600.	7.31	34.57	27.06	110.6	1.131
406.	9.35	34.68	0.24	3.05	26.83	131.0	700.	6.43	34.55	27.16	101.8	1.239
507.	8.33	34.63	0.35	2.76	26.95	120.4	800.	5.74	34.54	27.24	94.1	1.338
609.	7.21	34.57	0.49	2.78	27.07	109.7	1000.	4.72	34.57	27.39	80.9	1.515
811.	5.68	34.54	0.79	3.06	27.25	93.4	1200.	4.02	34.58	27.47	73.0	1.671
1013.	4.67	34.57	0.99	3.49	27.39	80.2	1500.	3.16	34.61	27.58	62.6	1.877
1213.	3.98	34.58	1.34	3.01	27.48	72.6						
1516.	3.13	34.61	1.81	2.70	27.58	62.2						

TEMPERATURE ERROR TERM AT 75. METERS IS 0.13

CROMWELL 14, STATION 28, 13- 0N LAT, 148- 0W LONG, MAR. 21, 1965, 2000 G.C.T.
DRY BULB 24.9 WET BULB 21.3 WIND SPEED 25, DIR. 09 BAR. 16 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.92	34.22	5.00		22.80	506.7	0.	24.92	34.22	22.80	506.7	0.000
9.	24.92	34.22	5.05	0.27	22.80	507.0	10.	24.92	34.22	22.80	507.2	0.051
30.Δ	24.92	34.22			22.80	507.9	20.	24.95	34.22	22.79	508.0	0.102
51.	24.51	34.17	4.99	0.22	22.88	500.5	30.	24.92	34.22	22.80	507.9	0.153
76.	24.42	34.33	4.92	0.23	23.03	487.3	50.	24.53	34.17	22.88	501.0	0.255
101.	17.59	34.55	3.86	0.93	25.05	295.5	75.	24.48	34.32	23.01	489.8	0.380
126.	13.38	34.41	2.06	1.98	25.88	216.5	100.	17.90	34.54	24.97	303.2	0.480
151.	10.81	34.26	3.08	1.90	26.25	180.9	150.	10.87	34.26	26.24	181.8	0.602
175.	10.93	34.56	0.79	2.57	26.47	161.5	200.	10.77	34.62	26.54	154.8	0.687
201.	10.76	34.62	0.53	2.56	26.54	154.7	250.	10.22	34.64	26.65	145.0	0.762
227.	10.52	34.65	0.54	2.27	26.61	149.0	300.	9.80	34.65	26.73	138.4	0.834
252.	10.19	34.64	0.48	2.64	26.66	144.7	400.	8.88	34.61	26.85	128.4	0.968
277.	9.98	34.64	0.35	2.87	26.69	141.7	500.	7.79	34.56	26.98	117.2	1.092
301.	9.79	34.65	0.46	2.51	26.73	138.3	600.	6.81	34.54	27.10	106.0	1.205
401.	8.87	34.61	0.36	2.80	26.85	128.4	700.	5.98	34.53	27.20	96.7	1.308
502.	7.77	34.56	0.62	3.01	26.98	117.0	800.	5.32	34.53	27.29	89.2	1.401
603.	6.78	34.54	0.48	2.94	27.11	105.7	1000.	4.45	34.56	27.41	78.0	1.571
803.	5.30	34.53	0.66	2.98	27.29	89.0	1200.	3.79	34.57	27.49	70.9	1.722
1003.	4.44	34.56	0.98	3.09	27.41	77.9	1500.	3.08	34.59	27.57	63.0	1.925
1204.	3.78	34.57	1.27	2.96	27.49	70.8						
1506.	3.07	34.59	1.63	2.67	27.57	62.9						

CROMWELL 14, STATION 29, 14-30N LAT, 147-57W LONG, MAR. 22, 1965, 0500 G.C.T.
DRY BULB 24.8 WET BULB 21.2 WIND SPEED 20, DIR. 09 BAR. 14 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.38	34.56	4.97		22.91	495.6	0.	25.38	34.56	22.91	495.6	0.000
13.	25.39	34.56*	4.94	0.33	22.91	496.4	10.	25.41	34.56	22.91	496.5	0.050
47.	24.31	34.34	5.14	0.31	23.07	482.4	20.	25.27	34.50	22.90	497.6	0.100
72.	23.00	34.67	5.28	0.23	23.70	422.9	30.	25.00	34.42	22.93	495.7	0.150
96.	20.24	34.81	5.08	0.32	24.57	340.8	50.	24.21	34.37	23.13	477.1	0.248
120.	18.04	34.75	4.51	0.47	25.09	292.1	75.	22.68	34.70	23.82	412.3	0.360
144.	14.30	34.37	4.12	0.97	25.66	238.3	100.	19.91	34.82	24.67	331.9	0.454
167.	11.99	34.21	3.79	1.17	26.00	205.9	150.	13.59	34.31	25.76	228.5	0.595
192.	10.53	34.19	3.43	1.85	26.25	182.2	200.	10.16	34.19	26.31	176.2	0.697
215.	9.60	34.20	3.10	1.70	26.41	166.6	250.	8.75	34.23	26.58	151.4	0.780
240.	9.00	34.23	2.46	2.07	26.54	155.3	300.	9.19	34.49	26.70	140.7	0.853
263.	8.58	34.26	2.01	2.22	26.63	147.1	400.	8.45	34.55	26.87	126.4	0.988
287.	9.13	34.44	0.82	2.59	26.68	142.8	500.	7.48	34.54	27.01	114.0	1.109
382.	8.59	34.54	0.35	3.41	26.84	128.8	600.	6.42	34.51	27.13	102.7	1.219
479.	7.73	34.55	0.37	2.58	26.98	116.7	700.	5.75	34.52	27.23	94.2	1.318
575.	6.62	34.51	0.62	2.49	27.11	105.2	800.	5.30	34.54	27.30	87.8	1.410
767.	5.44	34.54	0.64	2.76	27.28	89.6	1000.	4.51	34.56	27.41	78.6	1.579
960.	4.68	34.56	0.84	2.99	27.38	80.5	1200.	3.79	34.58	27.49	70.3	1.730
1154.	3.88	34.57	1.12		27.48	71.6						
1449.	3.12	34.60	1.61	2.64	27.58	62.3						

ΔFROM BT DATA
*INTERPOLATED DATA

Table 1.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 14, STATION 30, 16- ON LAT, 147-55W LONG, MAR. 22, 1965, 1500 G.C.T.
DRY BULB 23.1 WET BULB 20.2 WIND SPEED 18, DIR. 08 BAR. 14 WEATHER 01 VIS. 7 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.50	34.27	4.99		23.26	462.8	0.	23.50	34.27	23.26	462.8	0.000
9.	23.52	34.26	4.99	0.25	23.24	464.5	10.	23.52	34.26	23.24	464.5	0.047
20.Δ	23.51	34.26			23.25	464.6	20.	23.51	34.26	23.25	464.6	0.094
30.Δ	23.42	34.24			23.26	463.9	30.	23.42	34.24	23.26	463.9	0.140
47.	22.77	34.23	5.11	0.23	23.44	447.4	50.	22.70	34.28	23.50	441.9	0.232
71.	22.36	34.72	5.05	0.22	23.92	401.8	75.	22.34	34.77	23.97	397.6	0.337
95.	21.97	34.93	4.95	0.43	24.19	377.1	100.	21.62	34.93	24.29	368.3	0.434
118.	20.25	34.88	4.98	0.26	24.62	336.7	150.	18.96	34.94	25.00	301.6	0.603
143.	19.12	34.91	4.81	0.36	24.94	307.3	200.	13.82	34.23	25.65	240.0	0.739
167.	18.20	34.90	4.72	0.36	25.16	286.6	250.	10.53	34.16	26.23	185.6	0.846
191.	14.99	34.34	4.16	0.94	25.48	256.1	300.	8.65	34.16	26.54	155.9	0.932
214.	12.28	34.15	3.55	2.06	25.90	216.8	400.	8.44	34.48	26.82	131.5	1.078
239.	11.01	34.15	4.04	1.43	26.13	194.5	500.	7.41	34.47	26.96	118.4	1.204
263.	9.98	34.17	3.14	1.83	26.33	176.0	600.	6.62	34.47	27.07	108.9	1.318
286.	8.88	34.13	3.41	2.02	26.48	161.7	700.	5.96	34.49	27.18	99.2	1.424
381.	8.62	34.46	0.58	2.78	26.78	135.1	800.	5.40	34.52	27.27	91.3	1.520
477.	7.61	34.47	0.44	2.46	26.94	120.8	1000.	4.49	34.54	27.39	80.0	1.693
572.	6.83	34.46	0.41	3.12	27.04	111.8	1200.	3.74	34.57	27.49	70.6	1.846
756.	5.63	34.51	0.52	3.20	27.23	94.2						
939.	4.76	34.53	0.70	2.88	27.35	83.5						
1124.	3.98	34.56	1.08	2.96	27.46	73.3						
1409.	3.17	34.59	2.21	3.12	27.56	63.4						

TEMPERATURE ERROR TERM AT 300. METERS IS 0.16

CROMWELL 14, STATION 31, 17-30N LAT, 148- 0W LONG, MAR. 23, 1965, 0000 G.C.T.
DRY BULB 24.1 WET BULB 20.9 WIND SPEED 20, DIR. 09 BAR. 16 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.68	34.33	5.05		23.25	463.5	0.	23.68	34.33	23.25	463.5	0.000
10.	23.66	34.33	5.11	0.19	23.26	463.4	10.	23.66	34.33	23.26	463.4	0.047
51.	23.40	34.30	5.00	0.31	23.31	459.8	20.	23.60	34.30	23.25	464.1	0.093
76.	23.37	34.54	5.06	0.81	23.50	442.6	30.	23.53	34.29	23.26	463.8	0.140
101.	22.80	34.94	5.09	0.26	23.97	399.0	50.	23.41	34.30	23.31	460.1	0.233
125.	21.02	35.04	4.97	0.20	24.54	345.2	75.	23.38	34.53	23.49	443.7	0.347
152.	19.71	35.08	4.95	0.26	24.92	309.9	100.	22.84	34.93	23.94	401.2	0.453
175.	19.15	35.05	4.95	0.43	25.04	299.0	150.	19.78	35.08	24.90	311.6	0.633
201.	17.94	34.85	4.72	0.80	25.19	285.2	200.	18.01	34.86	25.18	286.0	0.784
226.	14.87	34.45	4.16	1.70	25.60	246.6	250.	12.21	34.21	25.95	212.3	0.909
251.	12.12	34.20	4.23	0.95	25.96	211.1	300.	10.12	34.14	26.28	181.5	1.009
276.	10.91	34.14	4.30	1.09	26.14	194.3	400.	8.52	34.34	26.70	142.9	1.172
302.	10.07	34.14	3.87	1.83	26.29	180.5	500.	7.15	34.36	26.91	122.7	1.306
401.	8.51	34.34	1.29	1.49	26.70	142.6	600.	6.03	34.38	27.08	107.2	1.422
501.	7.14	34.36	0.85	2.54	26.92	122.5	700.	5.38	34.43	27.20	96.5	1.525
602.	6.01	34.38	0.81	2.67	27.08	106.9	800.	4.99	34.48	27.29	88.7	1.619
801.	4.99	34.48	0.87	2.62	27.29	88.7	1000.	4.34	34.54	27.41	78.2	1.788
1001.	4.34	34.54	1.04	2.54	27.41	78.1	1200.	3.72	34.56	27.49	70.8	1.939
1201.	3.72	34.56	1.22	2.46	27.49	70.8	1500.	2.93	34.61	27.60	59.7	2.137
1501.	2.93	34.61	1.62	2.54	27.60	59.7						

CROMWELL 14, STATION 32, 19- 1N LAT, 147-58W LONG, MAR. 23, 1965, 0900 G.C.T.
DRY BULB 22.7 WET BULB 20.2 WIND SPEED 18, DIR. 10 BAR. 18 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.26	34.34	5.29		23.38	451.1	0.	23.26	34.34	23.38	451.1	0.000
10.	23.27	34.34	5.37	0.23	23.38	451.8	10.	23.27	34.34	23.38	451.8	0.045
49.	23.04	34.46	5.32	0.30	23.53	438.3	20.	23.24	34.36	23.40	450.2	0.091
76.	22.74	34.60	5.27	0.33	23.73	421.0	30.	23.19	34.38	23.43	447.3	0.136
100.	22.45	34.98	5.27	0.15	24.10	386.6	50.	23.03	34.46	23.54	437.9	0.225
126.	21.64	35.13	5.21	0.24	24.44	355.0	75.	22.75	34.59	23.72	421.9	0.334
152.	20.37	35.09	4.98	0.32	24.75	325.8	100.	22.45	34.98	24.10	386.6	0.435
176.	19.51	35.06	4.98	0.32	24.95	307.2	150.	20.47	35.10	24.73	327.8	0.615
202.	17.84	34.85	4.76	0.53	25.22	282.9	200.	18.00	34.87	25.19	285.0	0.770
228.	14.97	34.44	4.13	1.69	25.57	249.4	250.	12.74	34.21	25.85	222.1	0.898
253.	12.48	34.19	3.89	1.50	25.89	218.6	300.	10.33	34.22	26.30	179.2	0.999
277.	11.18	34.20	3.38	0.83	26.14	194.7	400.	8.28	34.33	26.72	140.1	1.160
303.	10.24	34.22	1.24	1.96	26.32	177.5	500.	7.12	34.40	26.95	119.4	1.291
404.	8.23	34.33	2.92	2.14	26.73	139.1	600.	6.56	34.44	27.06	110.0	1.407
506.	7.07	34.40	0.72	2.69	26.96	118.6	700.	5.86	34.45	27.16	100.9	1.513
605.	6.54	34.44	0.49	3.00	27.06	109.7	800.	5.18	34.46	27.25	92.6	1.611
806.	5.14	34.46	0.48	3.10	27.25	92.1	1000.	4.42	34.51	27.37	81.4	1.787
1009.	4.39	34.51	0.98	3.07	27.38	81.0	1200.	3.78	34.55	27.47	72.4	1.943
1211.	3.75	34.55	1.05	3.05	27.48	71.9	1500.	2.99	34.59	27.58	62.0	2.147
1514.	2.96	34.59	1.56	2.94	27.58	61.6						

ΔFROM BT DATA

Table 1.--Continued

CROMWELL 14, STATION 33, 20-31N LAT, 147-53W LONG, MAR. 23, 1965, 1800 G.C.T.
DRY BULB 22.0 WET BULB 19.5 WIND SPEED 18, DIR. 10 BAR. 18 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.79	34.60	5.29		23.71	419.5	0.	22.79	34.60	23.71	419.5	0.000
9.	22.78	34.61	5.39	0.09	23.72	418.8	10.	22.76	34.61	23.73	418.1	0.042
51.	21.98	34.94	5.30	0.07	24.20	375.0	20.	22.60	34.67	23.82	410.2	0.084
76.	21.83	35.21	5.41	0.57	24.44	352.4	30.	22.41	34.74	23.92	400.6	0.125
102.	20.56	35.14	4.98	0.07	24.74	325.3	50.	22.00	34.93	24.18	376.4	0.203
126.	19.16	35.05	4.83	0.19	25.04	297.5	75.	21.84	35.20	24.43	353.3	0.295
153.	17.42	34.76	4.52	0.45	25.25	278.0	100.	20.68	35.15	24.71	327.5	0.381
178.	16.14	34.62	4.83	0.28	25.44	260.1	150.	17.61	34.79	25.23	279.8	0.534
203.	14.24	34.39	4.90		25.68	237.2	200.	14.47	34.42	25.66	240.0	0.665
229.	12.79	34.28	4.98	0.88	25.90	217.3	250.	11.86	34.21	26.02	205.5	0.777
254.	11.70	34.20	5.03	0.75	26.04	203.5	300.	10.12	34.13	26.27	181.9	0.875
279.	10.72	34.15	5.00	0.98	26.18	190.3	400.	7.61	34.10	26.65	146.9	1.041
304.	10.02	34.13	4.78	1.60	26.29	180.4	500.	6.15	34.17	26.90	122.8	1.177
405.	7.50	34.10	2.43	1.93	26.66	145.4	600.	5.40	34.23	27.04	109.7	1.294
508.	6.07	34.18	1.23	2.70	26.92	121.3	700.	4.95	34.34	27.18	97.3	1.399
609.	5.35	34.24	0.73	3.45	27.05	108.8	800.	4.62	34.45	27.30	86.3	1.491
811.	4.59	34.46	0.84	2.45	27.32	85.2	1000.	3.96	34.52	27.43	75.0	1.655
1013.	3.92	34.52	1.12	2.92	27.43	74.6	1200.	3.45	34.55	27.50	68.4	1.800
1215.	3.42	34.55	1.39	2.88	27.51	68.0	1500.	2.81	34.60	27.60	59.1	1.994
1518.	2.78	34.60	1.73	2.87	27.61	58.7						

CROMWELL 14, STATION 34, 22- ON LAT, 147-56W LONG, MAR. 24, 1965, 0300 G.C.T.
DRY BULB 22.5 WET BULB 19.5 WIND SPEED 13, DIR. 12 BAR. 17 WEATHER 03 VIS. 8 CLOUD TYPE 6, COVER 8

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.27	34.85	5.32		24.05	387.3	0.	22.27	34.85	24.05	387.3	0.000
10.	22.21	34.91	5.40	0.64	24.11	381.8	10.	22.21	34.91	24.11	381.8	0.039
51.	21.73	35.10	5.37	0.33	24.39	356.8	20.	22.13	34.96	24.17	376.7	0.077
75.	21.21	35.24		0.39	24.64	333.9	30.	22.03	35.00	24.23	370.9	0.115
99.	19.93	35.13	5.22	0.47	24.90	309.9	50.	21.75	35.10	24.38	357.5	0.188
124.	18.85	35.02	5.09	0.45	25.09	292.1	75.	21.21	35.24	24.64	333.9	0.275
148.	17.92	34.88	5.03	0.62	25.22	280.8	100.	19.88	35.13	24.91	309.0	0.356
172.	16.96	34.72	4.90	0.52	25.33	271.0	150.	17.85	34.87	25.23	280.2	0.504
197.	15.25	34.50	4.92	0.84	25.55	250.1	200.	15.03	34.47	25.58	247.6	0.637
222.	13.44	34.28	4.87	0.82	25.77	229.8	250.	11.78	34.14	25.98	209.1	0.753
245.	12.04	34.16	4.68		25.95	212.4	300.	9.97	34.09	26.27	182.5	0.851
271.	10.83	34.09	4.10	1.51	26.12	196.5	400.	7.79	34.07	26.60	151.4	1.020
295.	10.10	34.09	4.03	1.56	26.24	184.5	500.	6.25	34.14	26.86	126.4	1.160
390.	7.98	34.07	3.15	2.06	26.57	154.3	600.	5.48	34.25	27.04	109.8	1.279
488.	6.38	34.13	1.53	2.86	26.84	128.8	700.	5.00	34.36	27.19	96.8	1.384
585.	5.57	34.23	0.80	2.96	27.02	112.0	800.	4.66	34.44	27.29	87.4	1.477
779.	4.74	34.43	0.81	3.69	27.27	89.0	1000.	4.03	34.51	27.41	76.8	1.643
974.	4.11	34.50	1.11	3.30	27.40	78.0	1200.	3.49	34.55	27.50	68.8	1.791
1169.	3.58	34.54	1.22	2.89	27.48	70.3						
1463.	2.90	34.58	1.51	3.42	27.58	61.3						

CROMWELL 14, STATION 35, 23-30N LAT, 148- 0W LONG, MAR. 24, 1965, 1200 G.C.T.
DRY BULB 21.1 WET BULB 19.1 WIND SPEED 18, DIR. 10 BAR. 18 WEATHER 60 VIS. 6 CLOUD TYPE , COVER

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.00	34.85	5.34		24.12	380.1	0.	22.00	34.85	24.12	380.1	0.000
10.	22.00	34.84	5.33	0.13	24.12	381.2	10.	22.00	34.84	24.12	381.2	0.038
51.	22.02	34.86	5.35	0.29	24.13	381.8	20.	22.00	34.82	24.10	382.9	0.077
75.	22.05	35.05	5.27	0.21	24.26	369.8	30.	22.01	34.82	24.10	383.6	0.115
100.	21.42	35.29	5.14	0.26	24.62	336.7	50.	22.02	34.86	24.12	382.0	0.193
127.	20.31	35.20	5.09	0.32	24.85	315.4	75.	22.05	35.05	24.26	369.8	0.287
151.	19.13	35.05	4.90		25.04	297.6	100.	21.42	35.29	24.62	336.7	0.376
175.	19.02	35.09	5.08	0.40	25.10	292.9	150.	19.17	35.06	25.04	298.2	0.536
201.	17.86	34.89	4.95	0.85	25.24	280.4	200.	17.92	34.90	25.23	281.0	0.682
227.	16.03	34.60	4.90	0.63	25.45	260.6	250.	14.07	34.35	25.69	238.0	0.813
250.	14.07	34.35	4.90	0.74	25.69	238.0	300.	11.30	34.14	26.08	201.4	0.924
275.	12.55	34.24	4.89	0.92	25.91	216.8	400.	8.41	34.05	26.49	162.5	1.107
301.	11.25	34.14	5.00	1.18	26.08	200.9	500.	6.36	34.03	26.76	136.2	1.258
401.	8.39	34.05	4.03	1.90	26.49	162.2	600.	5.25	34.13	26.98	115.8	1.385
502.	6.33	34.03	2.53	2.21	26.77	135.7	700.	4.74	34.27	27.15	100.3	1.495
602.	5.24	34.13	1.11	3.36	26.98	115.5	800.	4.50	34.40	27.28	88.7	1.590
802.	4.50	34.40	0.65	3.12	27.28	88.5	1000.	4.00	34.51	27.42	76.2	1.757
1003.	3.99	34.51	1.04	3.36	27.42	76.1	1200.	3.50	34.55	27.50	68.8	1.904
1203.	3.49	34.55	1.26	2.78	27.50	68.7	1500.	2.90	34.58	27.58	61.4	2.102
1504.	2.89	34.58	1.62	3.63	27.58	61.4						

Table 1.--Continued

ORIGINAL DATA				DERIVED DATA		INTERPOLATED DATA					
CROMWELL 14, STATION 36, 25- ON LAT, 148- 7W LONG, MAR. 24, 1965, 2100 G.C.T. DRY BULB 19.2 WET BULB 17.7 WIND SPEED 14, DIR. 08 BAR. 19 WEATHER 60 VIS. 7 CLOUD TYPE 8, COVER 8											
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	21.07	35.01	4.62		24.50	344.1	0.	21.07	35.01	24.50	344.1	0.000
10.	21.16	35.04	4.80	0.21	24.50	344.6	10.	21.16	35.04	24.50	344.6	0.035
51.	20.89	35.26	4.57	0.21	24.74	323.2	20.	21.13	35.10	24.55	339.8	0.069
76.	20.90	35.26	4.56	0.36	24.74	324.4	30.	21.07	35.15	24.61	334.7	0.103
101.	20.82	35.26	4.58	0.19	24.76	323.2	50.	20.90	35.26	24.73	323.8	0.169
125.	20.58	35.23	4.56	0.36	24.80	320.1	75.	20.90	35.26	24.74	324.3	0.251
151.	19.07	35.06	4.29	0.28	25.07	295.4	100.	20.83	35.26	24.76	323.3	0.333
175.	17.80	34.87	4.21	0.34	25.24	279.6	150.	19.14	35.07	25.06	296.5	0.489
201.	16.39	34.66	4.17	1.13	25.42	263.4	200.	16.45	34.67	25.41	264.1	0.630
226.	14.72	34.46	4.25	0.53	25.64	242.7	250.	13.45	34.33	25.80	227.0	0.754
250.	13.45	34.33	4.24	0.74	25.80	227.0	300.	11.59	34.20	26.06	202.7	0.862
276.	12.34	34.26	4.34	0.99	25.97	211.4	400.	9.18	34.09	26.40	171.6	1.051
299.	11.62	34.20	4.37	0.97	26.06	203.1	500.	6.86	34.00	26.67	145.1	1.211
400.	9.18	34.09	4.11	1.41	26.40	171.6	600.	5.41	34.11	26.94	119.2	1.344
502.	6.82	34.00	2.89	2.30	26.68	144.6	700.	4.63	34.23	27.13	101.8	1.456
601.	5.40	34.11	1.10	3.00	26.95	119.0	800.	4.23	34.34	27.26	89.9	1.553
802.	4.23	34.34	1.00	3.43	27.26	89.7	1000.	3.80	34.48	27.41	76.1	1.721
1003.	3.80	34.48	1.07	3.24	27.42	76.0	1200.	3.35	34.53	27.50	68.5	1.868
1204.	3.34	34.53	1.13	3.00	27.50	68.4	1500.	2.81	34.58	27.59	60.4	2.064
1505.	2.80	34.58	1.45	2.74	27.59	60.3						

CROMWELL 14, STATION 37, 26-28N LAT, 148- 4W LONG, MAR. 25, 1965, 0600 G.C.T. DRY BULB 18.0 WET BULB 16.6 WIND SPEED 10, DIR. 01 BAR. 16 WEATHER 60 VIS. 7 CLOUD TYPE 8, COVER 9												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	20.82	35.06	4.69		24.61	334.0	0.	20.82	35.06	24.61	334.0	0.000
8.	20.91	35.20	4.69	0.42	24.69	326.5	10.	20.92	35.22	24.70	325.6	0.033
50.	20.58	35.23	4.69	0.11	24.80	317.4	20.	20.91	35.27	24.74	321.7	0.066
75.	20.13	35.21	4.69	0.11	24.91	308.3	30.	20.85	35.29	24.78	319.0	0.098
99.	19.99	35.21	4.48	0.32	24.94	305.6	50.	20.58	35.23	24.80	317.4	0.162
123.	19.86	35.20	4.65	0.11	24.97	303.9	75.	20.13	35.21	24.91	308.3	0.241
149.	19.72	35.18	4.63	0.09	24.99	302.8	100.	19.98	35.21	24.94	305.5	0.318
173.	17.97	34.89	4.34	0.17	25.21	282.1	150.	19.66	35.17	25.00	302.1	0.471
199.	16.11	34.63	4.41	1.30	25.46	259.3	200.	16.04	34.62	25.47	258.5	0.613
223.	14.68	34.46	4.34	0.38	25.64	241.8	250.	13.40	34.33	25.81	226.1	0.735
248.	13.51	34.34	4.34	0.47	25.80	227.4	300.	11.26	34.16	26.10	199.3	0.842
272.	12.22	34.22	4.25	0.90	25.96	212.0	400.	8.77	34.07	26.45	166.3	1.027
296.	11.38	34.17	4.32	1.32	26.08	200.9	500.	6.37	34.02	26.75	136.9	1.180
394.	8.94	34.08	3.96	2.20	26.43	168.4	600.	5.30	34.10	26.95	118.6	1.309
495.	6.45	34.02	2.56	0.94	26.74	138.0	700.	4.65	34.20	27.10	104.1	1.421
593.	5.35	34.09	1.35	2.41	26.94	119.7	800.	4.26	34.31	27.23	92.4	1.521
792.	4.29	34.30	0.45	3.00	27.22	93.3	1000.	3.69	34.47	27.42	75.2	1.690
992.	3.71	34.47	0.77	2.96	27.42	75.6	1200.	3.25	34.55	27.52	66.1	1.833
1192.	3.29	34.52	1.08	3.95	27.50	68.5	1500.	2.72	34.58	27.60	59.3	2.024
1500.	2.72	34.58	1.42	2.91	27.60	59.3						

CROMWELL 14, STATION 38, 25- 2N LAT, 151- 3W LONG, MAR. 26, 1965, 0000 G.C.T. DRY BULB 20.1 WET BULB 15.0 WIND SPEED 16, DIR. 29 BAR. 15 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 1												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	21.95	34.41			23.80	410.6	0.	21.95	34.41	23.80	410.6	0.000
10.	21.88	34.41			23.82	409.1	10.	21.88	34.41	23.82	409.1	0.041
51.	21.74	35.22			24.48	348.4	20.	21.85	34.59	23.97	395.5	0.082
75.	21.49	35.24			24.56	341.2	30.	21.82	34.78	24.12	381.1	0.121
100.	20.59	35.15			24.74	325.2	50.	21.74	35.20	24.46	350.0	0.195
124.	19.59	35.06			24.93	307.3	75.	21.49	35.24	24.56	341.2	0.282
149.	19.08	35.05			25.06	296.3	100.	20.59	35.15	24.74	325.2	0.366
174.	18.00	34.89			25.21	282.8	150.	19.05	35.05	25.06	295.9	0.522
199.	15.95	34.58			25.45	259.5	200.	15.88	34.57	25.46	258.7	0.662
224.	14.50	34.42			25.65	241.0	250.	13.15	34.29	25.83	224.0	0.784
248.	13.26	34.30			25.82	225.4	300.	10.92	34.15	26.14	194.6	0.889
273.	11.93	34.19			25.99	208.8	400.	8.26	34.05	26.51	160.4	1.068
297.	11.02	34.15			26.13	196.0	500.	6.45	34.02	26.74	137.9	1.219
395.	8.37	34.05			26.49	161.8	600.	5.52	34.10	26.92	121.4	1.350
496.	6.50	34.02			26.74	138.7	700.	4.88	34.21	27.08	106.2	1.465
594.	5.56	34.09			26.91	122.4	800.	4.45	34.33	27.23	93.2	1.566
792.	4.48	34.32			27.22	94.1	1000.	3.94	34.49	27.41	76.6	1.737
990.	3.96	34.49			27.41	77.1	1200.	3.48	34.53	27.49	69.9	1.886
1187.	3.51	34.53			27.48	70.3	1500.	2.84	34.58	27.59	60.7	2.084
1485.	2.87	34.58			27.58	61.0	2000.	2.11	34.63	27.69	50.9	2.368
2024.	2.08	34.63			27.69	50.6	2500.	1.67	34.66	27.75	45.1	2.612
2522.	1.66	34.66			27.75	45.0	3000.	1.59	34.68	27.77	44.1	2.840
3024.	1.59	34.68			27.77	44.2	4000.	1.48	34.70	27.79	43.9	3.291
4028.	1.48	34.70			27.79	43.9						
4912.	1.49	34.71			27.80	45.7						

SALINITY ERROR TERM AT 20. METERS IS 0.07
SALINITY ERROR TERM AT 30. METERS IS 0.09

Table 1.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 14, STATION 39, 24-57N LAT, 154- 1W LONG, MAR. 26, 1965, 1900 G.C.T.
DRY BULB 18.7 WET BULB 14.8 WIND SPEED 17, DIR. 27 BAR. 18 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 5

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	21.87	35.15	4.64		24.39	355.0	0.	21.87	35.15	24.39	355.0	0.000
9.	21.85	35.15	4.64	0.28	24.39	354.8	10.	21.84	35.15	24.40	354.6	0.036
49.	21.60	35.19	4.62	0.82	24.49	346.8	20.	21.79	35.16	24.42	352.9	0.071
75.	21.50	35.20	4.52	1.18	24.53	344.4	30.	21.73	35.17	24.44	351.0	0.107
99.	21.20	35.22	4.51	0.28	24.63	335.9	50.	21.60	35.19	24.49	346.7	0.177
123.	21.10	35.22	4.54	0.46	24.65	334.2	75.	21.50	35.20	24.53	344.4	0.264
148.	20.62	35.24	4.34	0.34	24.80	321.2	100.	21.20	35.22	24.63	335.9	0.350
173.	20.20	35.26	4.29	0.40	24.93	310.0	150.	20.58	35.24	24.81	320.3	0.515
199.	19.81	35.27	4.30	0.39	25.04	300.3	200.	19.81	35.27	25.04	300.3	0.672
223.	19.42	35.19	4.28	0.60	25.08	297.2	250.	17.50	34.85	25.30	276.5	0.817
248.	17.62	34.87	4.19	0.65	25.28	277.8	300.	13.35	34.32	25.82	227.1	0.944
273.	15.97	34.62	4.22	0.53	25.48	259.2	400.	10.03	34.12	26.28	183.1	1.131
297.	13.54	34.34	4.29	0.74	25.79	229.3	500.	7.32	34.02	26.62	150.2	1.319
396.	10.16	34.13	4.28	1.34	26.27	184.7	600.	5.79	34.08	26.88	125.8	1.459
497.	7.38	34.02	3.01	2.24	26.62	151.0	700.	4.94	34.19	27.07	108.0	1.577
596.	5.83	34.08	1.47	3.04	26.87	126.6	800.	4.49	34.31	27.21	94.6	1.679
796.	4.50	34.31	0.60	2.91	27.21	95.1	1000.	3.94	34.47	27.40	78.1	1.854
993.	3.96	34.47	0.96	3.04	27.39	78.6	1200.	3.43	34.55	27.51	68.1	2.002
1192.	3.43	34.53	1.16	3.37	27.49	69.4						
1493.	2.85	34.58	1.46	3.07	27.59	60.8						

CROMWELL 14, STATION 40, 24-59N LAT, 157- 0W LONG, MAR. 27, 1965, 1200 G.C.T.
DRY BULB 19.6 WET BULB 15.7 WIND SPEED 21, DIR. 29 BAR. 17 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	21.58	35.21			24.51	343.0	0.	21.58	35.21	24.51	343.0	0.000
9.	21.58	35.20			24.51	344.0	10.	21.58	35.20	24.51	344.1	0.035
50.	21.54	35.21			24.52	343.8	20.	21.59	35.20	24.50	344.7	0.069
75.	21.39	35.21			24.57	340.8	30.	21.58	35.20	24.51	344.8	0.104
101.	20.91	35.20			24.69	329.9	50.	21.54	35.21	24.52	343.8	0.173
126.	20.19	35.19			24.88	313.1	75.	21.39	35.21	24.57	340.8	0.260
151.	19.61	35.14			24.99	303.0	100.	20.93	35.20	24.68	330.5	0.344
176.	18.80	34.98			25.08	295.5	150.	19.63	35.14	24.99	303.3	0.504
201.	17.76	34.85			25.23	281.0	200.	17.80	34.86	25.23	281.6	0.651
226.	16.80	34.71			25.36	269.8	250.	15.16	34.51	25.57	249.3	0.785
252.	15.02	34.49			25.59	247.6	300.	12.47	34.22	25.91	217.3	0.903
278.	13.68	34.35			25.77	230.9	400.	8.95	34.08	26.43	168.8	1.097
302.	12.36	34.21			25.93	216.1	500.	7.04	34.07	26.70	142.5	1.255
403.	8.88	34.08			26.44	167.6	600.	5.55	34.10	26.92	121.7	1.388
504.	6.98	34.07			26.71	141.7	700.	4.75	34.19	27.09	105.9	1.503
604.	5.50	34.10			26.93	121.0	800.	4.35	34.30	27.22	93.8	1.604
805.	4.34	34.31			27.22	93.2	1000.	3.86	34.45	27.38	79.1	1.779
1005.	3.85	34.45			27.39	78.8	1200.	3.35	34.53	27.50	68.7	1.929
1206.	3.34	34.53			27.50	68.4	1500.	2.76	34.59	27.60	59.1	2.123
1507.	2.75	34.59			27.60	59.0						

CROMWELL 14, STATION 41, 23-30N LAT, 157- 0W LONG, MAR. 27, 1965, 2200 G.C.T.
DRY BULB 20.1 WET BULB 17.1 WIND SPEED 20, DIR. 29 BAR. 19 WEATHER 03 VIS. 8 CLOUD TYPE 2, COVER 5

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.46	35.15			24.22	370.8	0.	22.46	35.15	24.22	370.8	0.000
10.	22.47	35.14			24.21	372.2	10.	22.47	35.14	24.21	372.2	0.037
50.	22.03	35.21			24.39	356.8	20.	22.38	35.15	24.25	369.1	0.075
76.	21.94	35.21			24.41	355.4	30.	22.28	35.17	24.29	365.6	0.112
102.	21.61	35.21			24.51	347.6	50.	22.03	35.21	24.39	356.8	0.185
128.	21.23	35.19			24.60	340.0	75.	21.94	35.21	24.41	355.4	0.274
153.	19.50	35.06			24.96	306.1	100.	21.64	35.21	24.50	348.3	0.363
177.	18.10	34.87			25.17	286.7	150.	19.74	35.08	24.91	310.4	0.529
203.	16.30	34.64			25.42	262.9	200.	16.51	34.67	25.39	265.7	0.674
229.	14.58	34.43			25.64	242.1	250.	13.57	34.33	25.77	229.7	0.799
254.	13.40	34.31			25.80	227.6	300.	11.43	34.15	26.06	203.3	0.908
280.	12.24	34.20			25.94	214.0	400.	8.72	34.06	26.45	166.5	1.095
305.	11.24	34.14			26.08	200.8	500.	6.58	34.04	26.74	138.6	1.249
406.	8.60	34.06			26.47	164.8	600.	5.23	34.16	27.01	112.9	1.376
508.	6.44	34.04			26.76	136.6	700.	4.67	34.30	27.18	97.0	1.482
610.	5.14	34.18			27.03	110.6	800.	4.45	34.41	27.29	87.2	1.575
812.	4.44	34.42			27.30	86.4	1000.	3.84	34.51	27.43	74.5	1.738
1014.	3.80	34.51			27.44	73.9	1200.	3.33	34.56	27.52	66.2	1.881
1216.	3.29	34.56			27.53	65.7	1500.	2.75	34.59	27.60	58.9	2.071
1519.	2.72	34.59			27.61	58.7						

TEMPERATURE ERROR TERM AT 700. METERS IS 0.10

Table 1.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
CROMWELL 14, STATION 42, 22- ON LAT, 157- 2W LONG, MAR. 28, 1965, 0900 G.C.T. DRY BULB 21.4 WET BULB 17.6 WIND SPEED 08, DIR. 34 BAR. 19 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 2												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.56	35.15			24.19	373.5	0.	22.56	35.15	24.19	373.5	0.000
9.	22.58	35.15			24.19	374.4	10.	22.58	35.15	24.19	374.3	0.038
50.	22.24	35.19			24.31	363.9	20.	22.54	35.16	24.21	373.0	0.075
75.	21.91	35.20			24.41	355.2	30.	22.47	35.17	24.23	370.8	0.113
99.	21.50	35.20			24.53	345.3	50.	22.24	35.19	24.31	363.9	0.187
123.	20.29	35.11			24.79	321.3	75.	21.91	35.20	24.41	355.2	0.277
149.	18.55	34.93			25.10	292.2	100.	21.46	35.20	24.54	344.4	0.365
173.	17.49	34.79			25.25	278.1	150.	18.50	34.92	25.11	291.5	0.526
197.	16.27	34.64			25.43	262.1	200.	16.18	34.63	25.44	261.1	0.665
222.	15.42	34.53			25.54	252.3	250.	13.43	34.33	25.80	227.0	0.788
247.	13.58	34.34			25.78	228.8	300.	11.17	34.17	26.12	197.0	0.895
272.	12.48	34.25			25.93	214.7	400.	8.52	34.13	26.53	158.5	1.074
296.	11.32	34.18			26.10	199.1	500.	6.57	34.13	26.81	131.8	1.221
394.	8.67	34.13			26.51	160.5	600.	5.58	34.24	27.03	111.7	1.344
493.	6.66	34.12			26.79	133.4	700.	5.00	34.35	27.18	97.5	1.449
592.	5.64	34.23			27.01	113.0	800.	4.65	34.44	27.29	87.6	1.543
790.	4.68	34.43			27.28	88.4	1000.	4.06	34.51	27.42	76.6	1.709
987.	4.10	34.51			27.41	77.2	1200.	3.48	34.56	27.51	68.0	1.856
1185.	3.48	34.55			27.50	68.5						
1482.	2.86	34.59			27.59	60.2						

Table 2.--Original and derived oceanographic data for Townsend Cromwell cruise 15

CROMWELL 15, STATION 1, 20-35N LAT, 157-12W LONG, APR. 12, 1965, 0900 G.C.T.
DRY BULB 23.8 WET BULB 20.2 WIND SPEED 06, DIR. 10 BAR. 18 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 2

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.64	34.40			23.02	485.7	0.	24.64	34.40	23.02	485.7	0.000
14.	24.65	34.41			23.02	485.8	10.	24.66	34.40	23.01	486.5	0.049
48.	24.22	34.66			23.34	456.8	20.	24.62	34.44	23.05	483.1	0.098
73.	23.56	34.93			23.74	419.7	30.	24.52	34.50	23.13	476.3	0.146
96.	22.34	35.01			24.15	381.3	50.	24.19	34.68	23.37	454.2	0.240
119.	21.55	35.12			24.45	353.1	75.	23.46	34.94	23.78	416.2	0.349
146.	20.77	35.14			24.68	332.3	100.	22.18	35.03	24.21	375.7	0.449
170.	20.06	35.10			24.84	317.9	150.	20.67	35.14	24.71	329.9	0.627
194.	18.89	34.93			25.05	298.3	200.	18.52	34.94	25.11	292.6	0.784
217.	17.38	34.80			25.29	276.2	250.	15.07	34.53	25.61	245.8	0.920
243.	15.65	34.60			25.54	252.8	300.	12.24	34.26	25.99	210.4	1.035
266.	13.82	34.38			25.76	231.2	400.	8.75	34.15	26.51	160.7	1.222
291.	12.63	34.28			25.93	215.8	500.	6.73	34.18	26.84	129.7	1.368
387.	9.12	34.15			26.45	165.9	600.	5.81	34.30	27.05	110.1	1.490
485.	6.93	34.17			26.80	133.3	700.	5.18	34.39	27.20	96.3	1.594
581.	5.95	34.28			27.01	113.2	800.	4.74	34.46	27.30	86.9	1.686
777.	4.84	34.45			27.28	88.7	1000.	4.05	34.53	27.43	75.6	1.851
973.	4.14	34.52			27.41	76.9	1200.	3.48	34.57	27.52	67.1	1.995
1169.	3.56	34.56			27.50	68.6						
1469.	2.88	34.60			27.60	59.6						

CROMWELL 15, STATION 2, 19- 1N LAT, 156-58W LONG, APR. 12, 1965, 1900 G.C.T.
DRY BULB 23.3 WET BULB 20.8 WIND SPEED 28, DIR. 12 BAR. 16 WEATHER 02 VIS. 7 CLOUD TYPE 1, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.14	34.39			23.16	472.1	0.	24.14	34.39	23.16	472.1	0.000
9.	24.14	34.38			23.15	473.2	10.	24.14	34.38	23.15	473.2	0.048
30.Δ	24.15	34.42			23.18	471.4	20.	24.14	34.40	23.16	472.6	0.095
51.	24.15	34.44			23.19	470.8	30.	24.15	34.42	23.18	471.4	0.143
76.	23.60	34.86			23.67	426.0	50.	24.15	34.44	23.19	471.2	0.238
101.	22.90	35.02			24.00	396.0	75.	23.63	34.84	23.65	428.1	0.351
125.	22.04	35.17			24.36	362.8	100.	22.93	35.02	23.99	397.1	0.455
152.	20.54	35.03			24.66	334.5	150.	20.66	35.04	24.64	336.5	0.640
177.	19.21	35.00			24.99	304.1	200.	17.20	34.70	25.26	278.6	0.795
203.	16.92	34.66			25.29	275.4	250.	12.90	34.30	25.91	216.8	0.920
228.	15.04	34.50			25.60	246.6	300.	10.60	34.21	26.25	184.1	1.021
252.	12.60	34.28			25.93	214.3	400.	8.27	34.17	26.60	151.5	1.190
278.	11.02	34.23			26.19	189.7	500.	6.34	34.22	26.92	121.6	1.328
304.	10.56	34.21			26.26	183.7	600.	5.57	34.33	27.10	104.8	1.442
404.	8.17	34.17			26.62	150.0	700.	5.11	34.42	27.22	93.5	1.542
507.	6.24	34.23			26.94	119.8	800.	4.75	34.48	27.31	85.9	1.633
608.	5.54	34.34			27.11	103.8	1000.	4.10	34.47	27.38	80.2	1.801
810.	4.72	34.48			27.32	85.4	1200.	3.43	34.58	27.53	65.6	1.949
1012.	4.06	34.47			27.38	79.9	1500.	2.90	34.59	27.59	60.8	2.141
1213.	3.39	34.59			27.54	64.7						
1516.	2.88	34.59			27.59	60.6						

CROMWELL 15, STATION 3, 17-30N LAT, 157- 1W LONG, APR. 13, 1965, 0400 G.C.T.
DRY BULB 24.5 WET BULB 22.2 WIND SPEED 16, DIR. 11 BAR. 15 WEATHER 02 VIS. 7 CLOUD TYPE 2, COVER 7

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA				
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.98	34.49			23.28	460.4	0.	23.98	34.49	23.28	460.4	0.000
10.Δ	24.02	34.48			23.26	462.6	10.	24.02	34.48	23.26	462.6	0.046
30.Δ	23.94	34.54			23.33	456.8	20.	24.00	34.50	23.29	460.8	0.093
51.	23.78	34.63			23.45	446.6	30.	23.94	34.54	23.33	456.8	0.139
76.	22.77	35.06			24.07	388.6	50.	23.80	34.62	23.44	447.6	0.230
101.	21.07	34.94			24.45	352.9	75.	22.83	35.04	24.04	391.2	0.336
125.	20.30	35.05			24.74	326.0	100.	21.14	34.95	24.44	354.0	0.430
152.	17.94	34.74			25.11	291.5	150.	18.13	34.77	25.08	293.9	0.593
176.	16.60	34.63			25.34	269.5	200.	14.54	34.46	25.67	238.4	0.727
201.	14.45	34.45			25.69	237.1	250.	11.26	34.25	26.16	191.8	0.836
227.	12.54	34.27			25.94	213.2	300.	9.96	34.34	26.46	164.1	0.925
250.	11.26	34.25			26.16	191.8	400.	8.51	34.42	26.76	136.8	1.077
277.	10.44	34.29			26.34	175.2	500.	7.23	34.44	26.97	117.9	1.206
302.	9.92	34.34			26.47	163.3	600.	6.54	34.47	27.08	107.5	1.320
402.	8.49	34.42			26.76	136.4	700.	5.94	34.48	27.17	99.7	1.424
504.	7.19	34.44			26.97	117.4	800.	5.40	34.49	27.25	93.2	1.522
605.	6.51	34.47			27.09	107.1	1000.	4.45	34.52	27.38	81.0	1.698
806.	5.37	34.49			27.25	92.9	1200.	3.88	34.56	27.47	72.8	1.854
1007.	4.42	34.52			27.38	80.6	1500.	3.12	34.59	27.57	63.5	2.061
1208.	3.86	34.56			27.47	72.5						
1510.	3.10	34.59			27.57	63.2						

ΔFROM BT DATA

Table 2.--Continued

CROMWELL 15, STATION 4, 15-59N LAT, 157- 1W LONG, APR. 13, 1965, 1400 G.C.T.
DRY BULB 24.5 WET BULB 22.7 WIND SPEED 18, DIR. 10 BAR. 13 WEATHER 13 VIS. 6 CLOUD TYPE 5, COVER 7

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.49	34.19			22.90	496.5	0.	24.49	34.19	22.90	496.5	0.000
10.	24.48	34.19			22.91	496.6	10.	24.48	34.19	22.91	496.6	0.050
30.Δ	24.48	34.19			22.91	497.4	20.	24.48	34.19	22.91	496.9	0.100
50.	24.49	34.19			22.90	498.4	30.	24.48	34.19	22.91	497.4	0.150
74.	24.42	34.20			22.93	496.6	50.	24.49	34.19	22.90	498.4	0.250
99.	21.61	34.83			24.22	374.9	75.	24.32	34.22	22.98	492.2	0.375
123.	20.05	34.96			24.74	326.1	100.	21.53	34.84	24.25	372.0	0.484
148.	18.44	34.81			25.04	298.2	150.	18.18	34.78	25.08	294.2	0.652
171.	15.36	34.49			25.52	252.4	200.	12.76	34.33	25.94	212.5	0.780
196.	13.02	34.33			25.89	217.2	250.	10.47	34.36	26.39	169.7	0.876
221.	11.65	34.35			26.17	190.8	300.	9.57	34.44	26.61	150.2	0.957
245.	10.67	34.37			26.36	172.5	400.	8.07	34.45	26.86	127.5	1.097
270.	9.83	34.35			26.49	160.4	500.	7.07	34.48	27.02	112.5	1.218
294.	9.65	34.43			26.59	152.0	600.	6.24	34.48	27.13	102.4	1.326
389.	8.20	34.45			26.83	129.6	700.	5.61	34.50	27.22	94.4	1.426
490.	7.16	34.48			27.01	113.8	800.	5.13	34.51	27.29	88.2	1.518
588.	6.32	34.48			27.12	103.5	1000.	4.38	34.53	27.40	79.0	1.687
785.	5.20	34.51			27.29	88.9	1200.	3.79	34.57	27.49	70.8	1.839
982.	4.44	34.53			27.39	79.9						
1178.	3.87	34.58			27.49	70.9						
1477.	3.16	34.60			27.57	63.0						

CROMWELL 15, STATION 5, 14-34N LAT, 156-59W LONG, APR. 13, 1965, 2300 G.C.T.
DRY BULB 23.6 WET BULB 21.0 WIND SPEED 16, DIR. 11 BAR. 18 WEATHER 15 VIS. 7 CLOUD TYPE 8, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.65	33.80			22.56	529.2	0.	24.65	33.80	22.56	529.2	0.000
9.Δ	24.68	34.18			22.84	503.0	10.	24.68	34.19	22.85	502.0	0.052
30.Δ	24.64	34.20			22.87	501.2	20.	24.67	34.27	22.91	496.8	0.102
52.	24.62	34.21			22.88	500.8	30.	24.64	34.20	22.87	501.2	0.153
77.	23.82	34.58			23.40	452.4	50.	24.63	34.20	22.87	501.6	0.254
101.	21.64	34.82			24.20	376.5	75.	23.93	34.55	23.34	457.8	0.374
127.	19.04	34.79			24.87	313.4	100.	21.75	34.81	24.17	379.7	0.480
153.	15.19	34.45			25.53	251.2	150.	15.63	34.49	25.46	257.4	0.640
178.	12.75	34.25			25.88	217.4	200.	11.51	34.27	26.13	193.9	0.754
204.	11.34	34.28			26.17	189.9	250.	10.00	34.45	26.54	155.5	0.842
228.	10.26	34.33			26.40	168.1	300.	9.45	34.51	26.68	142.7	0.917
254.	9.99	34.47			26.56	153.9	400.	7.83	34.45	26.89	124.0	1.052
279.	9.76	34.52			26.64	146.9	500.	6.89	34.49	27.05	109.6	1.170
305.	9.37	34.51			26.69	141.8	600.	6.04	34.49	27.17	99.1	1.275
406.	7.74	34.45			26.90	123.0	700.	5.45	34.51	27.25	91.5	1.372
508.	6.83	34.49			27.06	108.6	800.	5.02	34.53	27.32	85.5	1.461
608.	5.98	34.49			27.17	98.4	1000.	4.29	34.55	27.42	76.9	1.625
811.	4.98	34.53			27.33	84.9	1200.	3.58	34.58	27.51	67.8	1.772
1013.	4.25	34.55			27.42	76.4	1500.	2.83	34.61	27.61	58.6	1.964
1216.	3.53	34.58			27.52	67.1						
1519.	2.79	34.61			27.61	58.1						

SALINITY ERROR TERM AT 20. METERS IS 0.05

CROMWELL 15, STATION 6, 12-58N LAT, 156-57W LONG, APR. 14, 1965, 0900 G.C.T.
DRY BULB 25.7 WET BULB 23.5 WIND SPEED 12, DIR. 13 BAR. 16 WEATHER 02 VIS. 7 CLOUD TYPE 4, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.87	34.42			22.66	520.1	0.	25.87	34.42	22.66	520.1	0.000
9.	25.90	34.43			22.66	520.6	10.	25.90	34.43	22.66	520.6	0.052
49.	25.85	34.44			22.68	520.0	20.	25.91	34.44	22.66	520.7	0.105
74.	25.76	34.42			22.69	519.8	30.	25.90	34.44	22.67	520.6	0.157
97.	22.53	34.77			23.91	403.8	50.	25.88	34.44	22.67	521.3	0.262
121.	16.74	34.51			25.22	279.7	75.	25.67	34.44	22.73	516.0	0.393
145.	14.04	34.42			25.75	229.4	100.	21.79	34.75	24.11	385.4	0.506
169.	11.73	34.28			26.10	196.1	150.	13.48	34.38	25.84	221.1	0.659
194.	10.96	34.40			26.34	174.2	200.	10.86	34.45	26.39	168.7	0.758
217.	10.64	34.58			26.53	156.0	250.	10.17	34.58	26.62	148.4	0.837
240.	10.33	34.58			26.59	151.2	300.	9.58	34.60	26.73	138.9	0.910
266.	9.93	34.59			26.66	144.3	400.	8.74	34.62	26.88	125.4	1.043
290.	9.68	34.59			26.71	140.7	500.	7.90	34.56	26.97	118.7	1.166
385.	8.85	34.63			26.87	126.3	600.	6.83	34.54	27.10	106.5	1.280
481.	8.11	34.57			26.94	121.0	700.	6.07	34.53	27.19	98.1	1.384
578.	7.02	34.54			27.07	108.7	800.	5.51	34.53	27.27	91.6	1.479
773.	5.65	34.53			27.25	93.2	1000.	4.66	34.55	27.38	81.1	1.654
967.	4.79	34.55			27.36	82.7	1200.	3.93	34.57	27.48	72.2	1.809
1159.	4.06	34.57			27.46	73.9						
1451.	3.21	34.60			27.57	63.5						

TEMPERATURE ERROR TERM AT 100. METERS IS 0.10

ΔFROM BT DATA

Table 2.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 15, STATION 7, 11-29N LAT, 156-54W LONG, APR. 14, 1965, 1800 G.C.T.
DRY BULB 25.4 WET BULB 23.9 WIND SPEED 10, DIR. 10 BAR. 16 WEATHER 02 VIS. 6 CLOUD TYPE 6, COVER 7

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	26.31	34.57			22.63	522.4	0.	26.31	34.57	22.63	522.4	0.000
9.	26.41	34.57			22.60	525.8	10.	26.41	34.57	22.60	525.9	0.053
30.Δ	26.40	34.57			22.61	526.3	20.	26.43	34.57	22.60	526.7	0.106
51.	26.38	34.57			22.61	526.6	30.	26.40	34.57	22.61	526.3	0.159
76.	20.90	34.70			24.31	364.9	50.	26.43	34.57	22.60	528.1	0.265
101.	16.86	34.60			25.26	275.2	75.	21.16	34.70	24.24	372.0	0.378
126.	13.76	34.41			25.80	224.0	100.	17.00	34.61	25.23	277.8	0.460
152.	11.82	34.54			26.29	178.2	150.	11.92	34.52	26.25	181.2	0.576
178.	11.28	34.66			26.48	160.3	200.	10.97	34.72	26.59	150.7	0.660
203.	10.94	34.73			26.60	149.8	250.	10.47	34.72	26.67	143.4	0.734
227.	10.70	34.73			26.64	146.2	300.	10.06	34.72	26.74	137.7	0.805
252.	10.45	34.72			26.67	143.2	400.	9.30	34.68	26.84	130.0	0.940
279.	10.20	34.72			26.72	139.5	500.	8.43	34.63	26.94	121.5	1.067
304.	10.04	34.72			26.75	137.4	600.	7.38	34.58	27.06	111.1	1.184
404.	9.27	34.68			26.84	129.7	700.	6.53	34.56	27.16	102.3	1.292
507.	8.36	34.63			26.95	120.9	800.	5.86	34.55	27.24	94.9	1.392
608.	7.30	34.58			27.07	110.3	1000.	4.91	34.56	27.36	83.9	1.573
809.	5.81	34.55			27.24	94.4	1200.	4.16	34.58	27.46	74.9	1.733
1012.	4.86	34.56			27.36	83.4	1500.	3.30	34.61	27.57	64.3	1.945
1212.	4.12	34.58			27.46	74.4						
1516.	3.26	34.61			27.57	63.8						

CROMWELL 15, STATION 7A, 10- 1N LAT, 154- 6W LONG, APR. 15, 1965, 1600 G.C.T.
DRY BULB 25.5 WET BULB 22.4 WIND SPEED 11, DIR. 07 BAR. 10 WEATHER 02 VIS. 8 CLOUD TYPE 4, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	26.27	34.47	5.29		22.57	528.4	0.	26.27	34.47	22.57	528.4	0.000
10.	26.30	34.47	5.89		22.56	529.7	10.	26.30	34.47	22.56	529.7	0.053
30.Δ	26.27	34.47			22.57	529.6	20.	26.29	34.47	22.56	529.9	0.107
50.	26.25	34.48	5.34		22.58	529.1	30.	26.27	34.47	22.57	529.6	0.160
76.	17.57	34.61	4.88		25.10	289.9	50.	26.25	34.48	22.58	529.1	0.267
100.	13.40	34.48	1.85		25.93	211.1	75.	17.95	34.61	25.00	299.0	0.371
125.	12.07	34.63	0.29		26.35	171.1	100.	13.40	34.48	25.93	211.1	0.435
151.	11.38	34.74	0.41		26.52	155.6	150.	11.40	34.74	26.52	155.9	0.528
175.	11.08	34.74	0.35		26.58	150.9	200.	10.83	34.74	26.62	147.1	0.604
201.	10.82	34.74	0.46		26.62	146.9	250.	10.39	34.72	26.69	142.1	0.677
225.	10.64	34.73	0.49		26.65	145.1	300.	9.94	34.71	26.76	136.4	0.747
250.	10.39	34.72	0.48		26.69	142.1	400.	9.12	34.67	26.86	128.0	0.880
276.	10.14	34.72	0.49		26.73	138.5	500.	8.25	34.62	26.96	119.7	1.006
300.	9.94	34.71	0.36		26.76	136.4	600.	7.35	34.57	27.05	111.6	1.122
399.	9.13	34.67	0.29		26.86	128.1	700.	6.37	34.55	27.17	100.4	1.229
501.	8.24	34.62	0.34		26.96	119.6	800.	5.49	34.55	27.28	90.0	1.326
601.	7.34	34.57	0.67		27.05	111.5	1000.	4.58	34.56	27.40	79.6	1.497
800.	5.49	34.55	0.67		27.28	90.0	1200.	3.87	34.58	27.49	71.2	1.650
999.	4.58	34.56	1.31		27.40	79.6						
1198.	3.90	34.58	1.52		27.48	71.5						
1498.	3.08	34.61	1.95		27.59	61.5						

CROMWELL 15, STATION 8, 11-30N LAT, 154- 2W LONG, APR. 16, 1965, 0100 G.C.T.
DRY BULB 26.2 WET BULB 22.8 WIND SPEED 13, DIR. 08 BAR. 17 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	26.55	34.56	4.73		22.55	530.3	0.	26.55	34.56	22.55	530.3	0.000
11.	26.05	34.51	5.12		22.67	519.4	10.	26.07	34.51	22.66	519.9	0.053
20.Δ	26.03	34.51			22.68	519.2	20.	26.03	34.51	22.68	519.2	0.105
30.Δ	26.01	34.52			22.69	518.2	30.	26.01	34.52	22.69	518.2	0.157
51.	26.00	34.52	4.76		22.69	518.8	50.	26.00	34.52	22.69	518.8	0.262
77.	25.55	34.47	4.86		22.79	510.1	75.	25.69	34.47	22.75	514.4	0.392
102.	19.78	34.81	4.71		24.69	329.4	100.	20.30	34.79	24.54	344.0	0.500
126.	16.29	34.57	3.82		25.37	265.4	150.	12.63	34.32	25.96	209.1	0.640
152.	12.37	34.31	2.76		26.00	205.2	200.	10.47	34.50	26.50	158.3	0.732
177.	11.00	34.43	1.57		26.35	172.3	250.	10.05	34.64	26.68	142.2	0.808
202.	10.45	34.51	1.08		26.51	157.5	300.	9.61	34.66	26.77	134.5	0.878
227.	10.38	34.62	0.58		26.61	148.8	400.	8.69	34.62	26.89	124.7	1.008
251.	10.03	34.64	0.45		26.69	142.0	500.	7.78	34.58	27.00	115.5	1.130
277.	9.86	34.67	0.37		26.74	137.5	600.	6.82	34.57	27.13	103.9	1.240
302.	9.59	34.66	0.36		26.78	134.3	700.	6.08	34.55	27.21	96.4	1.342
402.	8.67	34.62	0.76		26.89	124.5	800.	5.51	34.54	27.27	90.9	1.436
504.	7.74	34.58	0.69		27.00	115.1	1000.	4.62	34.56	27.39	80.3	1.609
605.	6.77	34.57	0.70		27.13	103.3	1200.	3.90	34.58	27.48	71.6	1.763
806.	5.48	34.54	1.12		27.28	90.6	1500.	3.14	34.61	27.58	62.2	1.967
1006.	4.60	34.56	1.17		27.39	80.0						
1207.	3.88	34.58	1.31		27.49	71.3						
1508.	3.12	34.61	1.80		27.58	62.0						

ΔFROM BT DATA

Table 2.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
CROMWELL 15, STATION 9, 13- 1N LAT, 154- 0W LONG, APR. 16, 1965, 1000 G.C.T. DRY BULB 25.1 WET BULB 22.4 WIND SPEED 10, DIR. 07 BAR. 14 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 2												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.84	34.34	4.83		22.61	525.0	0.	25.84	34.34	22.61	525.0	0.000
10.Δ	25.72	34.32	4.94		22.63	523.2	10.	25.72	34.32	22.63	523.2	0.053
30.Δ	25.69	34.33			22.65	522.4	20.	25.69	34.32	22.64	522.6	0.105
51.	25.66	34.34	4.76		22.66	521.7	30.	25.69	34.33	22.65	522.4	0.158
77.	25.08	34.39	4.84		22.88	502.1	50.	25.67	34.34	22.66	521.8	0.263
101.	19.99	34.74	4.70		24.59	339.7	75.	25.23	34.38	22.83	507.0	0.393
127.	15.29	34.46	4.91		25.51	251.8	100.	20.24	34.73	24.51	346.8	0.500
152.	12.78	34.31	3.20		25.92	213.0	150.	12.93	34.32	25.90	215.2	0.642
176.	10.87	34.22	3.14		26.21	185.5	200.	10.62	34.41	26.41	167.5	0.738
202.	10.62	34.43	1.55		26.42	166.3	250.	9.94	34.53	26.61	148.5	0.818
226.	9.90	34.41	1.47		26.53	156.2	300.	9.32	34.55	26.73	138.0	0.890
252.	9.95	34.54	0.64		26.62	148.0	400.	8.21	34.55	26.91	122.5	1.022
276.	9.59	34.54	0.50		26.68	142.6	500.	7.25	34.52	27.03	112.2	1.140
301.	9.31	34.55	0.41		26.74	137.8	600.	6.60	34.52	27.12	104.6	1.250
401.	8.20	34.55	0.47		26.91	122.4	700.	5.94	34.52	27.21	96.6	1.351
502.	7.23	34.52	0.54		27.03	112.0	800.	5.32	34.53	27.29	89.2	1.445
602.	6.59	34.52	0.54		27.12	104.5	1000.	4.41	34.55	27.41	78.3	1.615
803.	5.30	34.53	0.77		27.29	89.0	1200.	3.75	34.58	27.50	69.7	1.765
1004.	4.40	34.55	0.92		27.41	78.2	1500.	2.96	34.61	27.60	60.0	1.962
1204.	3.74	34.58	1.27		27.50	69.6						
1505.	2.95	34.61	1.79		27.60	59.9						

CROMWELL 15, STATION 10, 14-30N LAT, 153-59W LONG, APR. 16, 1965, 1900 G.C.T. DRY BULB 24.3 WET BULB 21.8 WIND SPEED 08, DIR. 12 BAR. 16 WEATHER 02 VIS. 9 CLOUD TYPE 8, COVER 3												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.52	34.32	4.83		22.69	517.0	0.	25.52	34.32	22.69	517.0	0.000
10.Δ	25.32	34.32	5.01		22.75	511.5	10.	25.32	34.32	22.75	511.5	0.052
30.Δ	25.20	34.33			22.80	508.1	20.	25.23	34.32	22.78	509.0	0.103
51.	25.15	34.34	4.80		22.82	506.7	30.	25.20	34.33	22.80	508.1	0.154
76.	25.04	34.38	4.83		23.03	487.2	50.	25.15	34.34	22.82	506.9	0.257
100.	21.88	34.95	5.08		24.23	373.4	75.	25.08	34.37	23.01	489.2	0.382
125.	19.56	34.92	4.65		24.83	316.8	100.	21.88	34.95	24.23	373.4	0.491
151.	17.66	34.79	4.35		25.21	281.3	150.	17.75	34.80	25.20	282.7	0.656
175.	13.99	34.38	3.89		25.73	232.1	200.	11.95	34.30	26.07	199.6	0.778
201.	11.90	34.30	2.17		26.08	198.5	250.	10.26	34.43	26.48	161.4	0.869
224.	10.91	34.36	1.72		26.31	177.0	300.	10.11	34.60	26.64	147.3	0.946
249.	10.26	34.42	1.44		26.47	162.0	400.	8.98	34.62	26.84	129.4	1.086
274.	10.32	34.60	0.53		26.60	150.3	500.	7.97	34.56	26.95	120.0	1.212
299.	10.12	34.60	0.41		26.64	147.4	600.	7.04	34.54	27.07	109.4	1.328
398.	9.00	34.62	0.19		26.84	129.6	700.	6.19	34.53	27.18	99.5	1.433
499.	7.98	34.56	0.37		26.95	120.1	800.	5.46	34.53	27.27	91.1	1.530
598.	7.06	34.54	0.26		27.07	109.6	1000.	4.57	34.55	27.39	80.2	1.703
797.	5.48	34.53	0.44		27.27	91.3	1200.	3.87	34.57	27.48	71.8	1.857
997.	4.58	34.55	1.01		27.39	80.4						
1196.	3.92	34.57	1.21		27.47	72.5						
1497.	3.04	34.60	1.58		27.58	61.7						

CROMWELL 15, STATION 11, 16- 0N LAT, 154- 1W LONG, APR. 17, 1965, 0500 G.C.T. DRY BULB 25.0 WET BULB 21.9 WIND SPEED 03, DIR. 18 BAR. 11 WEATHER 02 VIS. 9 CLOUD TYPE 8, COVER 1												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.90	34.29	4.91		22.86	501.1	0.	24.90	34.29	22.86	501.1	0.000
10.Δ	24.54	34.29	5.13		22.97	491.1	10.	24.54	34.29	22.97	491.1	0.050
30.Δ	24.39	34.30			23.02	486.9	20.	24.42	34.29	23.00	487.7	0.099
50.	24.24	34.32	4.76		23.08	481.9	30.	24.39	34.30	23.02	486.9	0.148
76.	24.13	34.35	4.53		23.13	477.7	50.	24.24	34.32	23.08	481.9	0.246
100.	21.45	34.99	4.85		24.38	359.1	75.	24.16	34.34	23.12	479.0	0.367
125.	19.53	35.01	4.32		24.91	309.5	100.	21.45	34.99	24.38	359.1	0.473
150.	17.39	34.72	4.60		25.23	280.1	150.	17.39	34.72	25.23	280.1	0.634
174.	15.06	34.46	4.23		25.56	248.3	200.	12.85	34.28	25.89	217.6	0.759
199.	12.90	34.23	2.96		25.87	218.7	250.	10.65	34.41	26.39	169.7	0.857
224.	11.87	34.37	1.68		26.14	193.4	300.	9.92	34.46	26.56	154.4	0.938
249.	10.66	34.40	1.87		26.39	170.2	400.	9.47	34.62	26.76	137.4	1.086
274.	10.54	34.51	1.14		26.50	160.7	500.	7.98	34.50	26.90	124.5	1.218
299.	9.93	34.46	0.47		26.56	154.6	600.	7.22	34.52	27.03	113.4	1.338
398.	9.50	34.62	0.14		26.76	137.7	700.	6.54	34.53	27.13	104.6	1.448
498.	8.00	34.50	0.11		26.90	124.8	800.	5.94	34.53	27.21	97.5	1.550
597.	7.24	34.52	0.11		27.03	113.6	1000.	4.95	34.53	27.33	86.5	1.736
795.	5.97	34.53	0.12		27.21	97.8	1200.	4.11	34.55	27.44	76.2	1.901
993.	4.98	34.53	0.69		27.33	86.9						
1193.	4.10	34.56	1.19		27.45	75.4						
1491.	3.35	34.59	1.54		27.55	66.2						

ΔFROM BT DATA

Table 2.--Continued

CROMWELL 15, STATION 12, 17-32N LAT, 153-58W LONG, APR. 17, 1965, 1200 G.C.T.
DRY BULB 23.5 WET BULB 21.5 WIND SPEED 06, DIR. 14 BAR. 14 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 1

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.38	34.46	4.93		23.14	473.9	0.	24.38	34.46	23.14	473.9	0.000
10.Δ	23.96	34.56	5.12		23.34	455.2	10.	23.96	34.56	23.34	455.2	0.047
30.Δ	23.74	34.71			23.52	439.0	20.	23.80	34.63	23.44	445.8	0.092
50.	23.55	34.98	5.08		23.78	414.9	30.	23.74	34.71	23.52	439.0	0.137
76.	22.83	35.13	5.02		24.10	385.2	50.	23.55	34.98	23.78	414.9	0.223
100.	21.78	35.19	4.89		24.44	353.4	75.	22.87	35.13	24.09	386.4	0.324
124.	20.47	35.11	4.57		24.74	325.9	100.	21.78	35.19	24.44	353.4	0.417
150.	19.16	35.02	4.43		25.01	300.5	150.	19.16	35.02	25.01	300.5	0.582
175.	17.73	34.81	4.28		25.21	282.3	200.	15.48	34.53	25.52	253.0	0.721
199.	15.57	34.54			25.51	254.1	250.	11.80	34.16	26.00	207.9	0.837
224.	13.52	34.31	4.43		25.77	229.2	300.	9.47	34.11	26.37	172.7	0.933
248.	11.90	34.17	4.48		25.98	209.2	400.	7.44	34.18	26.74	138.1	1.090
273.	10.72	34.11	5.12		26.15	193.1	500.	6.70	34.34	26.96	117.6	1.219
297.	9.57	34.11	0.44		26.35	174.4	600.	6.02	34.40	27.10	105.4	1.332
397.	7.47	34.18	0.12		26.73	138.9	700.	5.43	34.45	27.21	95.5	1.433
497.	6.72	34.34	1.16		26.96	118.0	800.	4.93	34.48	27.29	87.8	1.526
596.	6.05	34.40	0.65		27.09	105.9	1000.	4.21	34.52	27.41	77.8	1.694
795.	4.95	34.48	0.77		27.29	88.1	1200.	3.56	34.56	27.50	68.9	1.842
994.	4.23	34.52	1.00		27.40	78.2						
1193.	3.54	34.56	1.24		27.50	68.5						
1494.	2.88	34.60	1.68		27.60	59.7						

CROMWELL 15, STATION 13, 19- 2N LAT, 154- 0W LONG, APR. 17, 1965, 2200 G.C.T.
DRY BULB 24.5 WET BULB 22.1 WIND SPEED 14, DIR. 20 BAR. 13 WEATHER 03 VIS. 8 CLOUD TYPE 8, COVER 2

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.29	34.22	5.17		22.99	488.7	0.	24.29	34.22	22.99	488.7	0.000
11.Δ	24.16	34.22	5.22		23.03	485.4	10.	24.17	34.22	23.02	485.9	0.049
30.Δ	23.82	34.31			23.19	470.0	20.	24.01	34.25	23.09	479.3	0.098
50.	23.43	34.49	5.23		23.44	446.9	30.	23.82	34.31	23.19	470.0	0.146
74.	23.34	34.52	5.22		23.49	443.2	50.	23.43	34.49	23.44	446.9	0.238
98.	23.59	34.92	5.27		23.72	422.2	75.	23.36	34.54	23.50	442.5	0.350
123.	22.98	35.09	5.12		24.03	394.0	100.	23.57	34.94	23.74	420.3	0.459
148.	21.48	35.04	4.95		24.41	358.1	150.	21.42	35.05	24.44	355.5	0.654
171.	20.69	35.17	4.59		24.73	328.9	200.	18.56	34.93	25.10	293.9	0.818
196.	18.89	34.98	4.38		25.05	298.4	250.	13.66	34.33	25.76	231.3	0.950
221.	16.65	34.67	4.60		25.36	269.1	300.	10.57	34.14	26.21	188.6	1.056
245.	14.04	34.37	4.75		25.71	235.8	400.	8.41	34.15	26.57	155.0	1.229
270.	12.35	34.21	4.95		25.93	215.1	500.	6.46	34.20	26.89	124.7	1.371
294.	10.80	34.15	5.19		26.17	192.0	600.	5.88	34.34	27.07	107.9	1.488
391.	8.63	34.15	3.06		26.53	158.3	700.	5.41	34.43	27.20	96.7	1.591
490.	6.56	34.19	2.27		26.86	126.8	800.	5.01	34.48	27.28	89.2	1.685
587.	5.95	34.33	0.89		27.05	109.6	1000.	4.30	34.52	27.40	78.8	1.855
783.	5.08	34.47	0.72		27.27	90.3	1200.	3.67	34.56	27.49	70.3	2.006
978.	4.38	34.52	0.87		27.39	79.9						
1174.	3.73	34.55	1.11		27.48	71.4						
1469.	2.98	34.59	1.52		27.58	61.5						

CROMWELL 15, STATION 14, 20-31N LAT, 153-54W LONG, APR. 18, 1965, 0600 G.C.T.
DRY BULB 24.1 WET BULB 21.5 WIND SPEED 10, DIR. 20 BAR. 14 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.27	34.20	4.95		22.98	489.5	0.	24.27	34.20	22.98	489.5	0.000
10.	24.03	34.24	5.25		23.08	480.2	10.	24.03	34.24	23.08	480.2	0.049
50.	23.51	34.76	5.04		23.62	429.7	20.	23.89	34.35	23.20	468.7	0.097
75.	22.97	35.02	5.07		23.98	396.9	30.	23.75	34.47	23.34	456.5	0.143
98.	22.13	35.15	4.95		24.32	365.6	50.	23.51	34.76	23.62	429.7	0.233
123.	21.50	35.20	4.82		24.53	346.2	75.	22.97	35.02	23.98	396.9	0.337
148.	20.30	35.16	4.65		24.82	318.8	100.	22.08	35.16	24.33	363.9	0.432
172.	18.76	34.99	4.48		25.09	293.7	150.	20.18	35.15	24.85	316.6	0.604
197.	17.15	34.75	4.43		25.31	273.9	200.	16.92	34.72	25.34	271.0	0.752
221.	15.28	34.52	4.43		25.56	250.0	250.	13.10	34.28	25.83	224.0	0.877
245.	13.43	34.31	4.56		25.79	228.0	300.	11.03	34.24	26.20	189.5	0.981
270.	12.00	34.20	4.40		25.99	209.3	400.	8.67	34.36	26.69	143.9	1.149
294.	11.20	34.23	3.32		26.16	193.2	500.	6.90	34.31	26.91	123.2	1.284
392.	8.85	34.36	1.25		26.66	146.3	600.	6.10	34.39	27.08	107.6	1.401
491.	7.00	34.30	1.05		26.89	124.8	700.	5.47	34.43	27.19	97.0	1.504
589.	6.18	34.38	0.75		27.06	109.0	800.	4.96	34.46	27.28	89.4	1.598
785.	5.03	34.46	1.09		27.27	90.5	1000.	4.18	34.51	27.40	78.2	1.768
982.	4.25	34.51	1.09		27.39	79.0	1200.	3.53	34.54	27.49	69.7	1.918
1178.	3.56	34.53	1.35		27.48	70.8						
1475.	2.95	34.59	1.62		27.58	61.2						

ΔFROM BT DATA

Table 2.--Continued

CROMWELL 15, STATION 15, 21-59N LAT, 154- 0W LONG, APR. 18, 1965, 1500 G.C.T.
DRY BULB 22.4 WET BULB 19.5 WIND SPEED 12, DIR. 29 BAR. 11 WEATHER 20 VIS. 7 CLOUD TYPE 8, COVER 3

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.09	34.97	5.45		23.91	401.0	0.	23.09	34.97	23.91	401.0	0.000
10.	23.19	34.97	5.68		23.88	404.1	10.	23.19	34.97	23.88	404.1	0.041
30.Δ	23.04	35.00			23.94	398.6	20.	23.15	34.98	23.90	402.6	0.081
48.	22.80	35.03	5.47		24.03	390.5	30.	23.04	35.00	23.94	398.6	0.122
73.	21.97	35.02	5.48		24.26	369.8	50.	22.75	35.03	24.05	389.5	0.201
95.	20.79	35.13	5.36		24.67	331.6	75.	21.86	35.03	24.30	366.2	0.296
120.	20.12	35.12	5.09		24.84	316.2	100.	20.62	35.13	24.72	327.4	0.383
144.	19.54	35.14	5.06		25.01	301.0	150.	19.16	35.08	25.06	296.2	0.541
167.	17.98	34.88	4.95		25.20	282.8	200.	16.07	34.61	25.45	259.8	0.681
191.	16.72	34.70	4.84		25.37	267.6	250.	12.84	34.26	25.87	220.0	0.802
215.	14.94	34.47	4.82		25.60	246.3	300.	10.64	34.11	26.16	192.5	0.906
239.	13.36	34.31	4.77		25.81	226.4	400.	8.01	34.08	26.57	154.5	1.081
262.	12.32	34.22	4.75		25.94	213.6	500.	6.23	34.11	26.84	128.4	1.224
287.	11.12	34.13	4.75		26.10	199.0	600.	5.31	34.23	27.05	108.7	1.343
382.	8.43	34.08	3.46		26.51	160.2	700.	4.80	34.35	27.20	95.1	1.446
478.	6.53	34.09	2.10		26.79	133.7	800.	4.47	34.43	27.31	85.7	1.538
574.	5.48	34.20	1.07		27.01	113.0	1000.	3.88	34.51	27.43	74.5	1.700
765.	4.61	34.41	0.81		27.27	88.7	1200.	3.42	34.56	27.51	67.3	1.844
957.	3.96	34.50	1.19		27.41	76.0						
1150.	3.62	34.54	1.22		27.48	70.6						
1441.	2.91	34.58	1.72		27.58	61.2						

CROMWELL 15, STATION 16, 23-30N LAT, 153-58W LONG, APR. 18, 1965, 2300 G.C.T.
DRY BULB 21.9 WET BULB 17.6 WIND SPEED 12, DIR. 34 BAR. 14 WEATHER 01 VIS. 8 CLOUD TYPE 8, COVER 5

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.72	34.68	4.95		23.79	411.8	0.	22.72	34.68	23.79	411.8	0.000
10.	22.81	34.69	5.17		23.77	413.9	10.	22.81	34.69	23.77	413.9	0.042
30.Δ	22.60	34.69			23.83	408.9	20.	22.80	34.67	23.76	415.1	0.083
50.	21.43	34.98	5.03		24.38	357.5	30.	22.60	34.69	23.83	408.9	0.125
75.	21.08	35.18	5.10		24.63	334.8	50.	21.43	34.98	24.38	357.5	0.202
98.	19.77	35.06	4.59		24.89	310.9	75.	21.08	35.18	24.63	334.8	0.289
122.	18.62	34.99	4.66		25.13	288.6	100.	19.69	35.06	24.91	309.1	0.370
147.	16.36	34.67	4.62		25.43	260.4	150.	16.10	34.64	25.46	257.2	0.513
171.	14.51	34.45	4.70		25.67	237.5	200.	12.99	34.30	25.87	218.9	0.633
196.	13.19	34.32	4.77		25.85	221.3	250.	11.12	34.19	26.14	194.0	0.737
221.	12.04	34.22	4.81		26.00	207.4	300.	9.88	34.12	26.31	178.7	0.831
243.	11.36	34.20	4.91		26.11	197.1	400.	7.17	34.03	26.65	145.9	0.995
269.	10.53	34.15	4.81		26.22	186.8	500.	5.90	34.07	26.85	127.2	1.133
293.	10.08	34.13	4.76		26.28	181.2	600.	5.10	34.17	27.03	110.7	1.253
390.	7.35	34.03	4.73		26.63	148.2	700.	4.65	34.30	27.18	96.7	1.358
488.	6.03	34.06	1.88		26.83	129.4	800.	4.39	34.42	27.30	85.8	1.450
585.	5.18	34.15	1.16		27.00	113.1	1000.	3.92	34.53	27.44	74.0	1.612
780.	4.44	34.40	0.85		27.28	87.5	1200.	3.45	34.57	27.52	66.6	1.754
976.	3.98	34.52	1.11		27.43	75.0						
1172.	3.49	34.55	1.19		27.50	68.5						
1472.	2.91	34.58	1.59		27.58	61.4						

CROMWELL 15, STATION 17, 23-27N LAT, 151- 2W LONG, APR. 19, 1965, 1500 G.C.T.
DRY BULB 20.5 WET BULB 15.7 WIND SPEED 10, DIR. 32 BAR. 14 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 7

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.25	34.82			24.03	389.0	0.	22.25	34.82	24.03	389.0	0.000
10.	22.28	34.82			24.02	390.2	10.	22.28	34.82	24.02	390.2	0.039
50.	21.82	34.86			24.18	376.5	20.	22.19	34.82	24.05	387.8	0.078
75.	21.77	34.93			24.25	371.0	30.	22.08	34.83	24.09	384.8	0.117
98.	21.68	35.10			24.40	357.2	50.	21.82	34.86	24.18	376.5	0.194
122.	21.54	35.22			24.53	345.7	75.	21.77	34.93	24.25	371.0	0.288
147.	21.02	35.23			24.68	332.3	100.	21.68	35.11	24.41	356.2	0.380
171.	20.08	35.19			24.90	311.9	150.	20.92	35.23	24.71	330.0	0.553
196.	18.76	35.05			25.14	290.2	200.	18.63	35.03	25.16	288.6	0.709
220.	17.87	34.90			25.25	280.5	250.	15.64	34.57	25.51	255.2	0.846
245.	16.05	34.62			25.46	260.1	300.	12.84	34.27	25.88	220.8	0.966
270.	14.15	34.39			25.70	237.3	400.	9.42	34.10	26.37	174.3	1.165
294.	13.09	34.29			25.84	224.0	500.	7.02	34.08	26.71	141.4	1.324
393.	9.62	34.11			26.34	177.1	600.	5.48	34.13	26.95	118.6	1.456
492.	7.18	34.08			26.69	143.6	700.	4.72	34.24	27.13	102.0	1.567
592.	5.56	34.12			26.93	120.1	800.	4.38	34.36	27.26	89.9	1.664
789.	4.41	34.35			27.25	91.0	1000.	3.92	34.49	27.41	76.4	1.832
989.	3.95	34.49			27.41	76.9	1200.	3.45	34.56	27.51	67.5	1.978
1188.	3.46	34.54			27.50	69.0						
1489.	2.81	34.59			27.60	59.6						

ΔFROM BT DATA

Table 2.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 15, STATION 18, 22- ON LAT, 151- OW LONG, APR. 19, 1965, 2300 G.C.T.
DRY BULB 22.5 WET BULB 18.5 WIND SPEED 08, DIR. 21 BAR. 17 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.51	34.67			23.56	434.3	0.	23.51	34.67	23.56	434.3	0.000
9.Δ	23.12	34.66			23.66	424.5	10.	23.10	34.66	23.67	423.6	0.043
30.	22.86	34.78			23.83	409.5	20.	22.92	34.71	23.76	415.4	0.085
49.	22.77	34.83			23.89	404.2	30.	22.86	34.78	23.83	409.5	0.127
73.	21.70	34.89			24.24	372.0	50.	22.73	34.83	23.90	403.0	0.209
97.	21.60	35.19			24.49	348.6	75.	21.69	34.92	24.26	369.8	0.306
120.	20.79	35.19			24.71	328.2	100.	21.52	35.20	24.52	345.8	0.396
146.	19.54	35.06			24.95	306.9	150.	19.33	35.03	24.98	303.6	0.560
169.	18.26	34.90			25.15	288.1	200.	16.43	34.65	25.40	264.8	0.703
194.	16.78	34.70			25.35	269.0	250.	12.58	34.23	25.90	217.4	0.825
218.	15.23	34.50			25.55	250.3	300.	10.37	34.13	26.23	186.5	0.927
242.	13.07	34.28			25.84	223.0	400.	7.70	34.07	26.61	150.0	1.096
265.	11.83	34.17			26.00	208.3	500.	6.03	34.14	26.89	123.5	1.234
289.	10.77	34.14			26.17	192.1	600.	5.20	34.23	27.06	107.9	1.351
386.	8.01	34.07			26.56	154.7	700.	4.86	34.35	27.20	95.5	1.454
483.	6.24	34.13			26.86	126.9	800.	4.68	34.46	27.30	86.5	1.546
580.	5.30	34.20			27.03	110.8	1000.	4.07	34.52	27.42	76.5	1.711
773.	4.76	34.44			27.28	88.4	1200.	3.54	34.55	27.50	69.0	1.858
968.	4.16	34.51			27.40	77.8						
1161.	3.64	34.54			27.48	70.9						
1457.	2.97	34.58			27.57	62.1						

CROMWELL 15, STATION 19, 20-29N LAT, 150-56W LONG, APR. 19, 1965, 2200 G.C.T.
DRY BULB 23.2 WET BULB 20.1 WIND SPEED 10, DIR. 08 BAR. 14 WEATHER 03 VIS. 5 CLOUD TYPE 7, COVER

OBSERVED DATA REJECTED DUE TO EQUIPMENT FAILURE

CROMWELL 15, STATION 20, 19- ON LAT, 150-59W LONG, APR. 20, 1965, 1700 G.C.T.
DRY BULB 22.5 WET BULB 20.4 WIND SPEED 18, DIR. 06 BAR. 18 WEATHER 03 VIS. 6 CLOUD TYPE 8, COVER 7

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.05	34.36			23.16	471.8	0.	24.05	34.36	23.16	471.8	0.000
9.	24.05	34.36			23.16	472.1	10.	24.05	34.36	23.16	472.3	0.048
46.	23.82	34.34			23.22	468.5	20.	24.04	34.34	23.15	473.5	0.095
69.	23.30	34.46			23.46	446.2	30.	23.99	34.33	23.16	473.0	0.143
92.	22.90	34.64			23.71	423.1	50.	23.74	34.36	23.25	465.2	0.237
114.	22.28	34.93			24.11	386.1	75.	23.20	34.50	23.52	441.0	0.351
138.	21.60	35.11			24.43	355.8	100.	22.69	34.75	23.85	410.0	0.459
161.	20.01	35.01			24.79	322.8	150.	20.84	35.08	24.62	338.8	0.647
184.	18.17	34.85			25.13	290.1	200.	16.60	34.65	25.36	268.9	0.800
206.	16.01	34.57			25.43	261.7	250.	12.57	34.25	25.92	215.6	0.923
229.	14.23	34.39			25.69	237.8	300.	10.43	34.20	26.27	182.3	1.023
253.	12.36	34.24			25.95	212.7	400.	8.23	34.29	26.70	142.2	1.187
275.	11.37	34.21			26.11	197.3	500.	7.28	34.40	26.93	121.7	1.320
367.	8.65	34.23			26.59	152.3	600.	6.28	34.40	27.06	109.1	1.436
460.	7.74	34.39			26.85	128.3	700.	5.55	34.43	27.18	98.7	1.541
552.	6.70	34.39			27.00	114.9	800.	5.00	34.46	27.27	89.9	1.637
738.	5.33	34.44			27.21	95.2	1000.	4.16	34.53	27.42	76.7	1.805
923.	4.46	34.51			27.37	81.1	1200.	3.52	34.57	27.51	67.6	1.951
1111.	3.78	34.55			27.47	71.5						
1400.	3.11	34.59			27.57	62.6						

ΔFROM BT DATA

Table 2.--Continued

CROMWELL 15, STATION 21, 17-31N LAT, 151- 0W LONG, APR. 21, 1965, 0200 G.C.T.
DRY BULB 25.0 WET BULB 22.1 WIND SPEED 22, DIR. 06 BAR. 14 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.01	34.42			22.92	494.9	0.	25.01	34.42	22.92	494.9	0.000
9.	25.01	34.41			22.91	496.0	10.	25.01	34.41	22.91	496.1	0.050
30.Δ	24.96	34.41			22.93	495.3	20.	25.02	34.41	22.91	496.7	0.100
50.	24.43	34.39			23.07	482.3	30.	24.96	34.41	22.93	495.3	0.150
75.	23.62	34.48			23.38	453.9	50.	24.43	34.39	23.07	482.3	0.248
99.	22.68	34.92			23.99	397.1	75.	23.62	34.48	23.38	453.9	0.366
124.	21.18	35.07			24.52	347.2	100.	22.62	34.93	24.01	394.8	0.473
149.	20.20	35.10			24.80	320.7	150.	20.18	35.10	24.81	320.2	0.653
174.	19.50	35.02			24.93	309.7	200.	17.69	34.79	25.20	283.7	0.806
199.	17.79	34.80			25.19	285.2	250.	13.14	34.31	25.85	222.2	0.933
223.	15.22	34.50			25.56	250.2	300.	10.44	34.24	26.31	179.1	1.034
249.	13.22	34.32			25.84	223.2	400.	8.42	34.34	26.72	141.0	1.196
273.	11.44	34.19			26.08	199.9	500.	7.39	34.42	26.93	121.6	1.328
298.	10.50	34.24			26.29	180.3	600.	6.53	34.45	27.07	108.6	1.445
397.	8.46	34.34			26.71	141.8	700.	5.79	34.48	27.19	97.9	1.549
497.	7.42	34.42			26.92	122.0	800.	5.17	34.50	27.28	89.5	1.644
596.	6.56	34.45			27.07	109.1	1000.	4.30	34.51	27.39	79.8	1.815
795.	5.20	34.50			27.28	89.8	1200.	3.62	34.55	27.49	70.2	1.967
995.	4.32	34.51			27.38	80.0	1500.	2.89	34.59	27.59	60.6	2.166
1193.	3.64	34.55			27.49	70.5	2000.	2.13	34.64	27.70	50.1	2.447
1494.	2.90	34.59			27.59	60.7	2500.	1.81	34.68	27.75	45.7	2.691
2075.	2.06	34.65			27.71	49.1	3000.	1.67	34.69	27.77	44.5	2.921
2576.	1.79	34.68			27.75	45.4	4000.	1.45	34.70	27.80	43.3	3.371
3079.	1.65	34.69			27.77	44.5						
4082.	1.44	34.70			27.80	43.4						

CROMWELL 15, STATION 22, 16- 1N LAT, 151- 2W LONG, APR. 21, 1965, 1300 G.C.T.
DRY BULB 23.9 WET BULB 21.5 WIND SPEED 18, DIR. 08 BAR. 17 WEATHER 02 VIS. 6 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.00	34.45			22.95	492.4	0.	25.00	34.45	22.95	492.4	0.000
10.	25.04	34.46			22.94	493.3	10.	25.04	34.46	22.94	493.3	0.050
50.	24.44	34.39			23.07	482.6	20.	24.92	34.45	22.97	490.9	0.099
75.	24.41	34.38			23.07	483.4	30.	24.77	34.43	23.00	488.4	0.149
100.	23.32	34.66			23.60	433.5	50.	24.44	34.39	23.07	482.6	0.246
124.	21.43	34.96			24.37	361.7	75.	24.41	34.38	23.07	483.4	0.368
150.	19.64	34.99			24.87	314.6	100.	23.32	34.66	23.60	433.5	0.484
174.	16.77	34.59			25.27	276.2	150.	19.64	34.99	24.87	314.6	0.672
216.	10.51	34.18			26.24	183.1	200.	12.77	34.30	25.91	215.1	0.805
308.	9.42	34.37			26.58	153.0	250.	9.10	34.17	26.47	161.5	0.900
499.	7.29	34.43			26.95	119.5	300.	9.17	34.33	26.58	152.1	0.980
636.	6.12	34.44			27.12	104.4	400.	8.35	34.43	26.79	133.4	1.124
765.	5.26	34.44			27.22	94.7	500.	7.28	34.43	26.95	119.3	1.251
989.	4.45	34.51			27.37	81.6	600.	6.40	34.44	27.08	107.8	1.366
							700.	5.66	34.44	27.17	99.2	1.470
							800.	5.09	34.45	27.25	91.8	1.567

TEMPERATURE ERROR TERM AT 200. METERS IS 0.20
TEMPERATURE ERROR TERM AT 250. METERS IS 0.67
SALINITY ERROR TERM AT 250. METERS IS 0.06
TEMPERATURE ERROR TERM AT 300. METERS IS 0.23

CROMWELL 15, STATION 23, 14-32N LAT, 151- 5W LONG, APR. 21, 1965, 2100 G.C.T.
DRY BULB 25.9 WET BULB 22.1 WIND SPEED 15, DIR. 12 BAR. 16 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 4

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.54	34.30			22.67	519.0	0.	25.54	34.30	22.67	519.0	0.000
11.	25.55	34.31			22.67	519.0	10.	25.55	34.31	22.67	519.1	0.052
30.Δ	25.46	34.33			22.72	515.7	20.	25.53	34.32	22.68	518.3	0.105
52.	25.06	34.41			22.90	499.1	30.	25.46	34.33	22.72	515.7	0.157
78.	25.01	34.42			22.92	497.9	50.	25.10	34.40	22.88	500.6	0.259
103.	20.25	34.64			24.44	353.6	75.	25.13	34.42	22.88	501.7	0.385
128.	17.86	34.76			25.14	287.4	100.	20.88	34.61	24.25	371.7	0.495
155.	15.06	34.45			25.55	248.5	150.	15.58	34.52	25.49	254.3	0.653
180.	12.57	34.24			25.91	214.8	200.	11.57	34.34	26.18	189.7	0.765
206.	11.40	34.39			26.25	183.0	250.	10.34	34.51	26.53	156.9	0.852
231.	10.99	34.53			26.43	166.0	300.	10.26	34.67	26.67	144.8	0.928
257.	10.15	34.50			26.56	154.4	400.	9.00	34.62	26.84	129.9	1.067
283.	10.40	34.66			26.64	147.4	500.	7.91	34.56	26.97	118.7	1.192
308.	10.15	34.66			26.68	143.7	600.	7.02	34.55	27.08	108.2	1.307
409.	8.88	34.61			26.85	128.7	700.	6.20	34.54	27.18	99.1	1.412
511.	7.80	34.56			26.98	117.6	800.	5.50	34.53	27.27	91.5	1.508
613.	6.91	34.55			27.10	106.9	1000.	4.60	34.55	27.38	80.9	1.682
816.	5.40	34.53			27.28	90.4	1200.	3.91	34.57	27.47	72.5	1.838
1016.	4.55	34.55			27.39	80.2	1500.	3.08	34.60	27.58	62.4	2.043
1220.	3.85	34.57			27.48	71.8						
1523.	3.03	34.60			27.59	61.7						

TEMPERATURE ERROR TERM AT 100. METERS IS 0.12

ΔFROM BT DATA

Table 2.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 15, STATION 24, 12-59N LAT, 151- 0W LONG, APR. 22, 1965, 0700 G.C.T.
DRY BULB 25.3 WET BULB 22.0 WIND SPEED 10, DIR. 07 BAR. 17 WEATHER 02 VIS. 7 CLOUD TYPE 3, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.47	34.30			22.69	516.9	0.	25.47	34.30	22.69	516.9	0.000
10.	25.49	34.30			22.68	517.9	10.	25.49	34.30	22.68	517.9	0.052
50.	25.39	34.29			22.71	517.3	20.	25.48	34.30	22.68	518.3	0.104
75.	25.26	34.29			22.75	514.5	30.	25.47	34.30	22.69	518.4	0.157
99.	22.52	34.45			23.67	426.7	50.	25.39	34.29	22.71	517.3	0.261
123.	16.24	34.51			25.33	268.6	75.	25.26	34.29	22.75	514.5	0.391
149.	13.13	34.25			25.81	224.0	100.	22.26	34.46	23.75	419.3	0.508
173.	11.84	34.30			26.10	196.7	150.	13.06	34.25	25.82	222.7	0.670
198.	10.53	34.34			26.37	171.3	200.	10.51	34.36	26.38	169.8	0.769
222.	10.57	34.55			26.52	157.1	250.	10.64	34.65	26.59	151.2	0.850
247.	10.67	34.65			26.58	152.0	300.	10.03	34.66	26.70	141.5	0.924
271.	10.33	34.66			26.65	146.0	400.	8.94	34.63	26.86	127.7	1.060
295.	10.08	34.66			26.69	142.3	500.	7.74	34.56	26.99	116.7	1.183
393.	9.03	34.64			26.85	128.5	600.	6.74	34.54	27.11	105.2	1.295
493.	7.82	34.56			26.98	117.6	700.	5.98	34.52	27.20	97.1	1.397
591.	6.82	34.54			27.10	106.0	800.	5.39	34.52	27.27	90.7	1.492
788.	5.45	34.52			27.26	91.5	1000.	4.53	34.56	27.40	78.9	1.664
985.	4.59	34.56			27.39	79.6	1200.	3.80	34.59	27.50	69.8	1.814
1183.	3.84	34.58			27.49	70.6						
1480.	3.07	34.61			27.59	61.2						

CROMWELL 15, STATION 25, 11-28N LAT, 150-59W LONG, APR. 22, 1965, 1700 G.C.T.
DRY BULB 25.4 WET BULB 22.5 WIND SPEED 23, DIR. 07 BAR. 15 WEATHER 02 VIS. 8 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.75	34.46			22.73	513.7	0.	25.75	34.46	22.73	513.7	0.000
11.	25.78	34.46			22.72	515.0	10.	25.78	34.46	22.72	514.9	0.052
30.Δ	25.77	34.46			22.72	515.4	20.	25.78	34.46	22.72	515.4	0.104
51.	25.75	34.46			22.73	515.7	30.	25.77	34.46	22.72	515.4	0.156
75.	24.83	34.50			23.04	486.8	50.	25.76	34.46	22.72	515.9	0.260
100.	18.37	34.62			24.91	308.7	75.	24.83	34.50	23.04	486.8	0.386
124.	13.84	34.36			25.75	229.2	100.	18.37	34.62	24.91	308.7	0.486
150.	11.94	34.53			26.25	181.1	150.	11.94	34.53	26.25	181.1	0.609
173.	11.16	34.61			26.46	161.8	200.	10.78	34.65	26.56	152.7	0.694
199.	10.79	34.65			26.56	153.0	250.	10.32	34.67	26.66	144.4	0.768
223.	10.52	34.66			26.62	148.1	300.	9.87	34.68	26.74	137.5	0.840
247.	10.34	34.67			26.66	144.9	400.	8.87	34.63	26.87	127.1	0.973
272.	10.17	34.69			26.70	141.1	500.	7.95	34.59	26.98	117.6	1.097
296.	9.91	34.68			26.74	138.0	600.	7.09	34.56	27.08	108.7	1.211
395.	8.92	34.63			26.86	127.6	700.	6.34	34.54	27.17	100.6	1.317
495.	8.00	34.59			26.97	118.1	800.	5.70	34.54	27.25	93.4	1.415
594.	7.14	34.56			27.07	109.2	1000.	4.73	34.57	27.39	80.8	1.591
792.	5.74	34.54			27.24	93.9	1200.	3.94	34.58	27.48	71.9	1.746
989.	4.78	34.57			27.38	81.4	1500.	3.14	34.61	27.58	62.1	1.949
1188.	3.98	34.58			27.48	72.4	2000.	2.26	34.64	27.69	51.6	2.238
1486.	3.17	34.61			27.58	62.5	2500.	1.88	34.68	27.74	46.7	2.489
2093.	2.15	34.65			27.70	50.3	3000.	1.70	34.69	27.77	45.0	2.723
2597.	1.85	34.68			27.75	46.3	4000.	1.43	34.70	27.80	42.9	3.173
3101.	1.67	34.69			27.77	44.8						
4109.	1.41	34.70			27.80	43.0						

CROMWELL 15, STATION 26, 10- 2N LAT, 148- 5W LONG, APR. 23, 1965, 1600 G.C.T.
DRY BULB 24.0 WET BULB 22.0 WIND SPEED 18, DIR. 05 BAR. 14 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.92	34.38	4.83		22.61	524.5	0.	25.92	34.38	22.61	524.5	0.000
10.	25.92	34.38	5.07		22.61	524.8	10.	25.92	34.38	22.61	524.8	0.053
30.Δ	25.90	34.38			22.62	525.0	20.	25.91	34.38	22.61	525.0	0.106
52.	25.87	34.38	4.91		22.63	525.0	30.	25.90	34.38	22.62	525.0	0.159
77.	15.13	34.40	2.78		25.50	251.4	50.	26.06	34.38	22.57	530.5	0.265
102.	11.91	34.48	1.08		26.22	183.0	75.	16.06	34.40	25.29	271.4	0.366
126.	11.88	34.72	0.19		26.41	165.5	100.	11.97	34.47	26.20	184.9	0.423
154.	11.32	34.76	0.27		26.55	153.1	150.	11.41	34.76	26.54	154.4	0.509
177.	10.95	34.74	0.38		26.60	148.6	200.	10.62	34.74	26.66	143.5	0.584
203.	10.58	34.74	0.88		26.67	142.8	250.	10.11	34.72	26.74	137.2	0.655
228.	10.32	34.73	0.59		26.71	139.7	300.	9.73	34.70	26.78	133.5	0.723
254.	10.07	34.72	1.18		26.74	136.8	400.	8.96	34.66	26.88	126.0	0.854
280.	9.85	34.71	0.59		26.77	134.4	500.	8.11	34.62	26.98	117.5	0.977
304.	9.71	34.70	0.55		26.79	133.4	600.	7.20	34.58	27.08	108.9	1.091
405.	8.92	34.66	0.21		26.88	125.6	700.	6.33	34.55	27.18	99.7	1.197
506.	8.06	34.62	0.31		26.99	117.0	800.	5.58	34.55	27.27	91.2	1.293
616.	7.05	34.57	0.47		27.09	107.5	1000.	4.65	34.56	27.39	80.6	1.467
808.	5.53	34.55	0.69		27.28	90.6	1200.	3.89	34.58	27.48	71.5	1.621
1011.	4.61	34.56	0.98		27.39	80.1	1500.	3.06	34.61	27.59	61.4	1.823
1212.	3.85	34.58	1.30		27.49	71.0						
1515.	3.03	34.61	1.74		27.59	61.0						

TEMPERATURE ERROR TERM AT 50. METERS IS 0.12
TEMPERATURE ERROR TERM AT 75. METERS IS 0.23

ΔFROM BT DATA

Table 2.--Continued

CROMWELL 15, STATION 27, 11-31N LAT, 148- 7W LONG, APR. 24, 1965, 0100 G.C.T.
DRY BULB 24.5 WET BULB 21.4 WIND SPEED 20, DIR. 05 BAR. 11 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 2

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.56	34.59	5.68		22.88	498.7	0.	25.56	34.59	22.88	498.7	0.000
10.	25.66	34.59	5.60		22.85	502.0	10.	25.66	34.59	22.85	502.0	0.050
52.	25.10*	34.55	5.51		22.99	490.2	20.	25.60	34.59	22.87	501.0	0.101
78.	24.70	34.49	4.99		23.07	483.9	30.	25.50	34.58	22.89	498.8	0.151
103.	19.60	34.63	4.75		24.60	338.0	50.	25.15	34.55	22.98	491.2	0.251
148.	13.27	34.35	2.60		25.85	219.3	75.	24.87	34.49	23.02	488.7	0.374
153.	11.86	34.45	1.35		26.21	185.6	100.	20.30	34.61	24.41	356.7	0.481
178.	11.11	34.54	1.21		26.42	166.2	150.	12.69	34.39	26.00	205.3	0.623
205.	10.72	34.63	0.46		26.56	153.4	200.	10.77	34.62	26.54	155.2	0.713
230.	10.44	34.67	0.44		26.64	146.2	250.	10.22	34.66	26.67	143.3	0.789
255.	10.16	34.66	0.33		26.68	142.7	300.	9.62	34.65	26.76	135.5	0.859
280.	9.80	34.65	0.39		26.73	138.0	400.	8.85	34.63	26.87	126.4	0.991
305.	9.58	34.65	0.27		26.77	134.9	500.	8.00	34.58	26.97	118.6	1.115
407.	8.80	34.63	0.25		26.88	125.9	600.	7.06	34.55	27.08	108.7	1.230
509.	7.92	34.58	0.65		26.98	117.9	700.	6.28	34.54	27.18	100.0	1.335
611.	6.96	34.55	0.66		27.09	107.6	800.	5.63	34.54	27.26	92.7	1.432
813.	5.56	34.54	0.87		27.27	91.8	1000.	4.63	34.55	27.38	81.1	1.608
1016.	4.56	34.55	1.00		27.39	80.3	1200.	3.91	34.58	27.48	71.8	1.763
1218.	3.85	34.59	1.46		27.49	71.0	1500.	3.06	34.61	27.59	61.4	1.966
1522.	3.01	34.61	1.94		27.59	60.8						

TEMPERATURE ERROR TERM AT 100. METERS IS 0.10

CROMWELL 15, STATION 28, 13- 0N LAT, 148- 1W LONG, APR. 24, 1965, 1200 G.C.T.
DRY BULB 23.9 WET BULB 21.1 WIND SPEED 23, DIR. 09 BAR. 15 WEATHER 02 VIS. 6 CLOUD TYPE 8, COVER 1

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.88	34.50	4.88		23.02	485.4	0.	24.88	34.50	23.02	485.4	0.000
10.	24.90	34.49	5.11		23.01	487.1	10.	24.90	34.49	23.01	487.1	0.049
49.	24.87	34.50	4.94		23.02	487.0	20.	24.88	34.48	23.01	487.6	0.098
73.	25.07	34.60	4.85		23.04	486.5	30.	24.87	34.48	23.01	487.7	0.147
97.	24.36	34.59	4.76		23.25	467.7	50.	24.89	34.50	23.02	487.2	0.245
120.	19.85	34.96	4.38		24.79	320.9	75.	25.11	34.59	23.02	488.1	0.368
146.	14.61	34.37	2.85		25.59	244.7	100.	23.88	34.65	23.43	449.8	0.486
169.	11.93	34.44	1.29		26.19	188.0	150.	14.00	34.36	25.71	233.2	0.658
194.	11.53	34.63	1.17		26.41	167.4	200.	11.47	34.65	26.44	164.7	0.759
218.	11.31	34.70	0.21		26.50	158.9	250.	10.87	34.72	26.60	150.6	0.838
243.	10.98	34.72	0.12		26.58	152.2	300.	10.25	34.69	26.68	143.4	0.912
266.	10.64	34.71	0.16		26.63	147.5	400.	9.14	34.64	26.83	130.4	1.050
290.	10.36	34.69	0.18		26.67	144.7	500.	7.90	34.57	26.97	118.2	1.176
386.	9.31	34.65	0.15		26.81	132.2	600.	6.84	34.53	27.09	107.4	1.290
483.	8.10	34.58	0.18		26.95	120.1	700.	6.05	34.53	27.19	97.9	1.394
580.	7.02	34.53	0.42		27.07	109.5	800.	5.45	34.54	27.28	90.2	1.489
774.	5.60	34.54	0.63		27.26	91.8	1000.	4.55	34.55	27.39	79.7	1.660
968.	4.67	34.55	0.90		27.38	81.2	1200.	3.83	34.58	27.49	70.8	1.813
1163.	4.00	34.58	1.09		27.47	72.4						
1457.	3.10	34.61	1.63		27.59	61.4						

CROMWELL 15, STATION 29, 14-29N LAT, 147-58W LONG, APR. 24, 1965, 2100 G.C.T.
DRY BULB 25.4 WET BULB 20.3 WIND SPEED 17, DIR. 10 BAR. 17 WEATHER 02 VIS. 8 CLOUD TYPE 4, COVER 5

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	25.47	34.51	5.21		22.85	501.8	0.	25.47	34.51	22.85	501.8	0.000
10.Δ	25.46	34.52	5.39		22.86	501.2	10.	25.46	34.52	22.86	501.2	0.051
30.Δ	25.45	34.52			22.86	501.7	20.	25.45	34.52	22.86	501.3	0.101
52.	25.44	34.53	5.21		22.87	501.5	30.	25.45	34.52	22.86	501.7	0.152
78.	25.03	34.67	5.16		23.10	480.5	50.	25.45	34.53	22.87	501.9	0.253
103.	20.80	34.93	5.32		24.51	346.7	75.	25.19	34.65	23.04	486.8	0.377
127.	19.09	34.99	5.02		25.01	300.2	100.	21.34	34.90	24.35	362.7	0.484
154.	15.61	34.48	3.99		25.45	258.0	150.	16.19	34.57	25.39	264.1	0.642
177.	12.33	34.20	3.52		25.92	213.2	200.	10.74	34.16	26.19	188.3	0.756
204.	10.61	34.17	4.06		26.22	185.3	250.	10.78	34.54	26.47	162.4	0.844
228.	10.59	34.32	2.24		26.34	174.5	300.	10.07	34.59	26.64	147.7	0.923
254.	10.80	34.57	0.73		26.50	160.3	400.	8.98	34.56	26.80	133.7	1.065
280.	10.35	34.60	0.51		26.60	150.9	500.	8.02	34.56	26.95	120.7	1.193
305.	10.01	34.58	0.53		26.64	147.2	600.	7.02	34.53	27.07	109.5	1.309
406.	8.92	34.56	0.38		26.81	132.9	700.	6.19	34.52	27.17	100.0	1.415
508.	7.95	34.56	0.48		26.96	119.8	800.	5.53	34.53	27.26	92.1	1.512
609.	6.93	34.53	0.55		27.08	108.6	1000.	4.60	34.55	27.38	80.8	1.687
811.	5.47	34.53	0.64		27.27	91.3	1200.	3.87	34.57	27.48	72.0	1.842
1014.	4.55	34.55	0.84		27.39	80.1	1500.	3.08	34.60	27.58	62.3	2.046
1215.	3.82	34.57	1.23		27.48	71.4						
1518.	3.04	34.60	1.75		27.58	61.8						

TEMPERATURE ERROR TERM AT 100. METERS IS 0.11

ΔFROM BT DATA
*INTERPOLATED DATA

Table 2.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 15, STATION 30, 16- ON LAT, 147-57W LONG, APR. 25, 1965, 0600 G.C.T.
DRY BULB 24.6 WET BULB 21.2 WIND SPEED 16, DIR. 09 BAR. 17 WEATHER 02 -- VIS. 8 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	24.55	34.53	4.91		23.14	473.7	0.	24.55	34.53	23.14	473.7	0.000
10.	24.55	34.53	5.18		23.14	474.1	10.	24.55	34.53	23.14	474.1	0.048
47.	23.57	34.49	5.16		23.40	450.7	20.	24.39	34.50	23.17	472.2	0.095
72.	22.60	34.74	5.20		23.87	406.9	30.	24.15	34.48	23.23	466.9	0.143
95.	22.00	35.01	5.08		24.25	372.1	50.	23.45	34.51	23.45	445.9	0.235
118.	20.18	35.04	4.99		24.76	323.4	75.	22.55	34.78	23.92	402.7	0.342
142.	19.27	35.01	4.81		24.98	303.7	100.	21.62	35.03	24.37	360.7	0.438
165.	17.20	34.68	4.42		25.24	279.1	150.	18.65	34.91	25.06	296.0	0.603
189.	14.47	34.37	4.07		25.62	243.0	200.	13.22	34.25	25.79	226.9	0.735
211.	12.14	34.17	3.93		25.94	212.7	250.	10.64	34.29	26.31	178.1	0.837
235.	10.90	34.17	4.04		26.17	191.0	300.	9.96	34.47	26.57	154.3	0.921
259.	10.58	34.37	1.74		26.38	171.3	400.	7.73	34.33	26.81	131.7	1.065
282.	10.39	34.48	1.00		26.50	160.5	500.	7.06	34.46	27.01	113.7	1.189
376.	7.98	34.30	1.38		26.75	137.1	600.	6.30	34.47	27.12	103.8	1.299
470.	7.30	34.45	0.52		26.96	117.7	700.	5.67	34.48	27.21	95.9	1.400
565.	6.55	34.47	0.46		27.08	104.1	800.	5.16	34.50	27.28	89.6	1.493
755.	5.37	34.49	0.60		27.25	92.3	1000.	4.36	34.53	27.40	78.8	1.664
936.	4.61	34.52	0.86		27.36	82.3	1200.	3.71	34.57	27.49	70.2	1.815
1075.	4.09	34.55	0.92		27.44	75.0						
1304.	3.44	34.58	1.28		27.53	66.7						

TEMPERATURE ERROR TERM AT 300. METERS IS 0.11

CROMWELL 15, STATION 31, 17-31N LAT, 147-58W LONG, APR. 25, 1965, 1500 G.C.T.
DRY BULB 23.7 WET BULB 20.9 WIND SPEED 16, DIR. 08 BAR. 16 WEATHER 02 VIS. 7 CLOUD TYPE 4, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.72	34.59	5.41		23.43	445.9	0.	23.72	34.59	23.43	445.9	0.000
10.	23.71	34.60	5.43		23.45	445.3	10.	23.71	34.60	23.45	445.3	0.045
50.	22.76	34.93	5.53		23.97	396.7	20.	23.55	34.67	23.55	436.0	0.089
75.	22.12	35.04	5.51		24.23	372.4	30.	23.33	34.75	23.67	424.8	0.133
98.	21.68	35.23	5.37		24.50	347.8	50.	22.76	34.93	23.97	396.7	0.215
122.	20.53	35.17	5.21		24.77	323.0	75.	22.12	35.04	24.23	372.4	0.312
147.	19.30	35.04	5.02		24.99	302.4	100.	21.60	35.23	24.52	345.6	0.403
171.	18.37	34.90	4.90		25.12	290.8	150.	19.21	35.03	25.01	301.2	0.566
195.	16.26	34.60	4.60		25.40	264.7	200.	15.72	34.53	25.47	258.3	0.707
220.	13.63	34.28	4.16		25.73	233.5	250.	11.53	34.19	26.07	201.0	0.822
245.	11.80	34.19	3.88		26.02	205.8	300.	9.48	34.14	26.39	170.6	0.916
270.	10.59	34.19	3.44		26.24	184.9	400.	7.99	34.29	26.74	138.1	1.072
292.	9.69	34.14	3.46		26.35	174.0	500.	6.98	34.39	26.97	117.7	1.201
390.	8.11	34.28	1.70		26.71	140.8	600.	6.06	34.41	27.10	105.7	1.314
488.	7.10	34.39	0.80		26.95	119.5	700.	5.46	34.45	27.21	95.7	1.416
586.	6.16	34.40	0.76		27.08	107.2	800.	5.01	34.49	27.29	87.9	1.509
782.	5.10	34.49	0.90		27.28	89.1	1000.	4.20	34.53	27.41	77.4	1.676
978.	4.27	34.52	1.07		27.40	78.5	1200.	3.58	34.55	27.50	69.5	1.825
1175.	3.69	34.56	1.25		27.49	70.2						
1473.	2.94	34.56	1.94		27.56	63.3						

CROMWELL 15, STATION 32, 19- ON LAT, 147-59W LONG, APR. 25, 1965, 2300 G.C.T.
DRY BULB 24.2 WET BULB 21.5 WIND SPEED 17, DIR. 09 BAR. 19 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 3

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.60	34.42	5.03		23.34	454.8	0.	23.60	34.42	23.34	454.8	0.000
11.	23.52	34.42	5.18		23.36	453.0	10.	23.53	34.42	23.36	453.3	0.046
52.	22.82	34.70	5.07		23.78	415.0	20.	23.44	34.47	23.42	447.8	0.091
77.	21.89	34.84	5.13		24.15	380.8	30.	23.30	34.53	23.51	439.9	0.136
102.	21.44	35.01	5.05		24.40	357.5	50.	22.87	34.68	23.75	417.7	0.222
127.	20.66	35.03	4.94		24.63	336.7	75.	21.96	34.83	24.12	383.5	0.323
152.	19.66	35.04	4.78		24.90	311.5	100.	21.47	35.00	24.38	359.1	0.417
177.	18.94	34.98	4.76		25.04	299.0	150.	19.74	35.04	24.88	313.4	0.586
202.	16.32	34.60	4.42		25.39	266.3	200.	16.56	34.63	25.36	269.1	0.733
228.	13.83	34.32	4.15		25.72	234.7	250.	12.15	34.21	25.97	211.1	0.854
253.	11.96	34.20	4.02		26.00	208.2	300.	9.85	34.14	26.33	176.8	0.952
279.	10.71	34.15	4.39		26.19	190.1	400.	7.69	34.24	26.74	138.1	1.111
303.	9.74	34.14	3.46		26.34	175.1	500.	6.81	34.37	26.97	116.9	1.239
403.	7.66	34.24	1.60		26.75	137.3	600.	6.28	34.45	27.10	105.6	1.352
505.	6.79	34.38	0.68		26.98	116.2	700.	5.67	34.47	27.20	96.7	1.454
607.	6.25	34.45	0.46		27.11	105.0	800.	5.07	34.48	27.28	89.6	1.548
808.	5.02	34.48	0.76		27.28	89.1	1000.	4.28	34.51	27.39	79.6	1.719
1008.	4.25	34.51	0.98		27.39	79.3	1200.	3.63	34.55	27.49	70.5	1.871
1209.	3.60	34.55	1.22		27.49	70.1	1500.	2.97	34.59	27.58	61.7	2.072
1511.	2.95	34.59	1.39		27.58	61.4						

Table 2.--Continued

CROMWELL 15, STATION 33, 20-31N LAT, 147-56W LONG, APR. 26, 1965, 0800 G.C.T.
DRY BULB 23.0 WET BULB 20.1 WIND SPEED 17, DIR. 10 BAR. 21 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 1

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.65	34.52	5.29		23.40	449.0	0.	23.65	34.52	23.40	449.0	0.000
10.	23.70	34.53	5.46		23.40	450.0	10.	23.70	34.53	23.40	450.0	0.045
51.	23.00	34.66	5.38		23.70	422.8	20.	23.60	34.53	23.43	447.5	0.090
75.	22.59	34.99	5.34		24.06	388.7	30.	23.45	34.55	23.48	442.4	0.135
99.	21.74	35.07	5.29		24.36	361.0	50.	23.03	34.65	23.68	424.0	0.223
124.	21.27	35.15	5.16		24.55	343.8	75.	22.59	34.99	24.06	388.7	0.325
149.	19.39	35.04	4.80		24.97	304.7	100.	21.73	35.08	24.37	360.4	0.419
173.	18.39	34.95	4.99		25.16	287.7	150.	19.34	35.04	24.98	303.8	0.587
199.	16.96	34.72	4.82		25.33	271.8	200.	16.87	34.71	25.34	270.7	0.731
224.	14.75	34.44	4.87		25.61	244.7	250.	13.19	34.29	25.82	224.9	0.856
248.	13.31	34.30	4.41		25.81	226.4	300.	10.78	34.13	26.16	193.2	0.962
273.	11.88	34.18	4.14		25.99	208.7	400.	8.58	34.35	26.70	142.9	1.131
299.	10.81	34.13	4.34		26.15	193.8	500.	6.99	34.33	26.92	122.5	1.265
397.	8.64	34.35	1.34		26.69	143.8	600.	6.32	34.42	27.08	108.0	1.382
497.	7.02	34.33	0.87		26.91	123.0	700.	5.70	34.47	27.19	97.5	1.486
596.	6.35	34.42	0.58		27.07	108.4	800.	5.16	34.49	27.28	90.0	1.580
795.	5.18	34.49	0.74		27.27	90.3	1000.	4.36	34.51	27.38	80.4	1.753
993.	4.38	34.51	0.24		27.38	80.7	1200.	3.72	34.54	27.47	71.9	1.907
1193.	3.78	34.55	1.11		27.47	72.2						
1493.	2.95	34.59	1.59		27.58	61.3						

CROMWELL 15, STATION 34, 22- 1N LAT, 147-56W LONG, APR. 26, 1965, 1700 G.C.T.
DRY BULB 22.0 WET BULB 19.5 WIND SPEED 10, DIR. 10 BAR. 22 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 2

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.37	34.60	5.14		23.54	435.4	0.	23.37	34.60	23.54	435.4	0.000
9.	23.38	34.60	5.14		23.54	436.0	10.	23.37	34.60	23.54	436.1	0.044
50.	22.76	34.65	5.07		23.76	416.9	20.	23.29	34.58	23.55	435.5	0.088
74.	22.15	34.95	5.12		24.16	379.7	30.	23.16	34.58	23.59	432.0	0.131
97.	21.79	35.14	5.07		24.40	357.2	50.	22.76	34.65	23.76	416.9	0.217
121.	21.20	35.15	4.91		24.57	341.8	75.	22.13	34.96	24.17	378.5	0.317
147.	19.94	35.04	4.58		24.83	318.4	100.	21.74	35.15	24.42	355.2	0.410
170.	19.33	35.04	4.50		24.99	303.9	150.	19.87	35.04	24.85	316.5	0.579
196.	17.60	34.78	4.36		25.22	282.1	200.	17.32	34.75	25.26	278.3	0.729
219.	15.97	34.59	4.53		25.46	259.8	250.	13.69	34.34	25.76	231.0	0.857
243.	14.24	34.39	4.59		25.68	238.4	300.	10.73	34.15	26.18	190.7	0.963
268.	12.36	34.24	4.58		25.95	213.1	400.	8.30	34.09	26.54	157.5	1.139
292.	11.04	34.17	4.54		26.14	194.7	500.	6.68	34.21	26.86	127.1	1.283
396.	8.38	34.09	3.71		26.52	159.0	600.	5.81	34.28	27.03	111.4	1.403
487.	6.83	34.20	1.42		26.83	129.8	700.	5.11	34.36	27.18	97.9	1.509
585.	5.93	34.27	0.87		27.01	113.8	800.	4.62	34.43	27.29	87.6	1.603
780.	4.69	34.42	0.77		27.27	89.1	1000.	4.08	34.52	27.42	76.6	1.769
975.	4.15	34.51	0.97		27.40	77.7	1200.	3.55	34.56	27.51	68.4	1.916
1171.	3.60	34.55	1.20		27.49	69.8						
1466.	2.94	34.59	1.49		27.59	61.0						

CROMWELL 15, STATION 35, 23-30N LAT, 147-55W LONG, APR. 27, 1965, 0100 G.C.T.
DRY BULB 23.7 WET BULB 19.9 WIND SPEED 09, DIR. 08 BAR. 20 WEATHER 00 VIS. 8 CLOUD TYPE 6, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.96	34.93	5.40		23.91	400.3	0.	22.96	34.93	23.91	400.3	0.000
10.	22.53	34.94	5.39		24.04	388.2	10.	22.53	34.94	24.04	388.2	0.040
30.Δ	21.50	35.17			24.51	344.9	20.	21.99	35.05	24.28	366.3	0.078
52.	21.10	35.24	5.40		24.67	330.2	30.	21.50	35.17	24.51	344.9	0.114
77.	20.61	35.22	5.28		24.79	319.9	50.	21.12	35.24	24.66	330.7	0.182
101.	19.74	35.13	5.04		24.95	305.2	75.	20.66	35.22	24.78	320.7	0.264
127.	19.02	35.06	5.01		25.08	293.4	100.	19.78	35.13	24.94	305.8	0.343
152.	17.85	34.88	4.98		25.24	279.3	150.	17.95	34.90	25.22	280.4	0.490
176.	16.64	34.69	4.85		25.38	266.1	200.	15.14	34.51	25.58	247.0	0.623
202.	15.02	34.50	5.02		25.60	245.4	250.	12.43	34.26	25.95	212.7	0.739
227.	13.79	34.38	5.14		25.76	231.0	300.	10.63	34.14	26.19	189.7	0.841
252.	12.32	34.25	5.16		25.97	211.2	400.	8.20	34.05	26.52	159.2	1.017
277.	11.45	34.19	5.18		26.08	200.2	500.	6.10	34.04	26.80	131.9	1.163
302.	10.56	34.14	5.13		26.20	188.8	600.	5.27	34.17	27.01	113.1	1.287
401.	8.18	34.05	4.10		26.52	159.0	700.	4.78	34.30	27.17	98.4	1.394
501.	6.08	34.04	2.41		26.81	131.7	800.	4.47	34.41	27.29	87.6	1.488
602.	5.26	34.17	1.00		27.01	112.8	1000.	4.01	34.50	27.41	77.0	1.655
802.	4.47	34.41	0.73		27.29	87.4	1200.	3.50	34.55	27.50	68.9	1.802
1003.	4.00	34.50	1.12		27.41	76.9						
1174.	3.53	34.54	1.22		27.49	69.7						
1409.	3.04	34.57	1.48		27.56	63.3						

ΔFROM BT DATA

Table 2.--Continued

ORIGINAL DATA | DERIVED DATA | INTERPOLATED DATA

CROMWELL 15, STATION 36, 24-59N LAT, 147-56W LONG, APR. 27, 1965, 0900 G.C.T.
DRY BULB 22.3 WET BULB 20.0 WIND SPEED 14, DIR. 07 BAR. 23 WEATHER 00 VIS. 7 CLOUD TYPE , COVER 0

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.83	34.90	5.17		23.93	398.9	0.	22.83	34.90	23.93	398.9	0.000
10.	22.25	34.86	5.54		24.06	386.5	10.	22.25	34.86	24.06	386.5	0.040
51.	20.71	35.12	5.27		24.68	328.7	20.	21.75	34.90	24.23	370.9	0.078
76.	20.39	35.22	5.20		24.84	314.2	30.	21.34	34.95	24.39	356.3	0.114
100.	19.96	35.19	5.24		24.94	306.3	50.	20.73	35.11	24.67	329.9	0.183
125.	19.28	35.09	5.00		25.04	297.5	75.	20.40	35.22	24.84	314.6	0.265
151.	18.16	34.91	4.77		25.18	284.4	100.	19.96	35.19	24.94	306.3	0.343
175.	16.38	34.67	4.84		25.43	261.7	150.	18.21	34.92	25.18	285.0	0.492
200.	14.72	34.46	4.82		25.64	242.0	200.	14.72	34.46	25.64	242.0	0.625
225.	13.42	34.34	4.86		25.82	225.1	250.	12.53	34.29	25.96	212.2	0.739
250.	12.53	34.29	5.00		25.96	212.2	300.	10.96	34.16	26.15	194.2	0.842
275.	11.61	34.23	5.03		26.08	200.1	400.	8.72	34.07	26.45	165.8	1.023
300.	10.96	34.16	4.98		26.15	194.2	500.	6.58	34.02	26.73	139.8	1.178
399.	8.74	34.07	4.40		26.45	166.1	600.	5.16	34.08	26.95	118.0	1.308
499.	6.60	34.02	2.88		26.72	140.1	700.	4.51	34.21	27.13	101.7	1.419
598.	5.18	34.08	1.47		26.95	118.4	800.	4.23	34.34	27.26	89.6	1.515
798.	4.24	34.34	0.48		27.26	89.8	1000.	3.77	34.46	27.40	77.0	1.684
997.	3.78	34.46	1.00		27.40	77.2	1200.	3.35	34.54	27.51	67.7	1.831
1197.	3.34	34.54	1.34		27.51	67.6						
1499.	2.82	34.58	1.55		27.59	60.5						

CROMWELL 15, STATION 37, 26-30N LAT, 148- 4W LONG, APR. 27, 1965, 1800 G.C.T.
DRY BULB 20.6 WET BULB 19.0 WIND SPEED 10, DIR. 05 BAR. 21 WEATHER 02 VIS. 8 CLOUD TYPE 4, COVER 7

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	21.79	35.25	5.48		24.49	345.6	0.	21.79	35.25	24.49	345.6	0.000
10.	21.46	35.24	5.90		24.57	338.0	10.	21.46	35.24	24.57	338.0	0.034
30.Δ	20.78	35.23			24.75	321.8	20.	21.10	35.23	24.66	329.4	0.068
51.	20.45	35.22	5.50		24.83	314.8	30.	20.78	35.23	24.75	321.8	0.101
76.	20.34	35.22	5.54		24.86	312.9	50.	20.46	35.22	24.83	315.0	0.165
101.	19.75	35.18	5.44		24.98	301.8	75.	20.35	35.22	24.86	313.0	0.244
125.	18.30	34.95	5.17		25.18	283.9	100.	19.79	35.18	24.98	302.4	0.322
151.	16.65	34.71	5.13		25.39	264.0	150.	16.71	34.72	25.39	264.8	0.465
176.	15.35	34.53	5.11		25.55	249.4	200.	13.86	34.37	25.75	231.3	0.590
201.	13.80	34.36	5.08		25.75	230.5	250.	11.92	34.24	26.03	204.5	0.699
226.	12.62	34.27	5.13		25.92	214.7	300.	10.72	34.19	26.21	187.8	0.798
251.	11.90	34.24	5.16		26.04	204.1	400.	8.50	34.07	26.49	162.3	0.975
276.	11.18	34.20	5.18		26.14	194.6	500.	6.68	34.01	26.70	141.9	1.129
300.	10.72	34.19	5.25		26.21	187.8	600.	5.25	34.08	26.94	119.5	1.261
401.	8.48	34.07	4.55		26.49	162.1	700.	4.56	34.18	27.10	104.2	1.374
502.	6.65	34.01	3.29		26.71	141.5	800.	4.23	34.30	27.22	92.9	1.473
602.	5.23	34.08	1.54		26.94	119.1	1000.	3.67	34.46	27.41	76.1	1.644
803.	4.23	34.30	0.44		27.23	92.7	1200.	3.19	34.53	27.51	66.8	1.789
1005.	3.66	34.46	0.86		27.41	75.8	1500.	2.64	34.59	27.61	57.7	1.978
1206.	3.18	34.53	1.27		27.52	66.5						
1508.	2.63	34.59	1.64		27.61	57.6						

CROMWELL 15, STATION 38, 25- 2N LAT, 151- 4W LONG, APR. 28, 1965, 1100 G.C.T.
DRY BULB 21.0 WET BULB 19.0 WIND SPEED 13, DIR. 03 BAR. 21 WEATHER 02 VIS. 6 CLOUD TYPE , COVER

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.64	34.91			23.99	393.0	0.	22.64	34.91	23.99	393.0	0.000
11.	22.63	34.92			24.00	392.4	10.	22.63	34.92	24.00	392.6	0.040
30.Δ	22.56	34.97			24.06	387.6	20.	22.63	34.93	24.01	391.7	0.079
51.	21.98	35.15			24.36	359.8	30.	22.56	34.97	24.06	387.6	0.118
77.	20.48	35.17			24.78	320.1	50.	22.02	35.14	24.34	361.5	0.194
102.	19.61	35.09			24.95	304.9	75.	20.60	35.17	24.75	322.8	0.280
126.	18.91	35.02			25.08	293.6	100.	19.67	35.10	24.94	305.6	0.359
153.	17.77	34.86			25.24	278.9	150.	17.92	34.88	25.22	280.8	0.507
177.	16.18	34.64			25.45	259.5	200.	14.95	34.47	25.59	246.0	0.640
203.	14.80	34.45			25.61	244.4	250.	12.68	34.25	25.89	217.9	0.757
228.	13.61	34.32			25.76	230.4	300.	10.96	34.15	26.14	195.1	0.861
254.	12.52	34.24			25.92	215.7	400.	8.43	34.06	26.49	161.9	1.041
278.	11.65	34.19			26.05	203.8	500.	6.44	34.05	26.77	135.8	1.191
304.	10.84	34.14			26.15	193.7	600.	5.36	34.15	26.98	115.4	1.318
404.	8.34	34.06			26.51	160.7	700.	4.77	34.26	27.14	100.8	1.427
505.	6.36	34.05			26.78	134.7	800.	4.43	34.36	27.26	90.3	1.524
606.	5.32	34.16			26.99	114.3	1000.	4.01	34.49	27.40	77.9	1.694
808.	4.41	34.37			27.26	89.7	1200.	3.46	34.53	27.49	69.9	1.844
1009.	3.99	34.49			27.40	77.6	1500.	2.87	34.58	27.58	61.2	2.043
1210.	3.43	34.53			27.49	69.5	2000.	2.14	34.64	27.69	50.4	2.327
1512.	2.85	34.58			27.59	61.0	2500.	1.78	34.67	27.75	45.8	2.572
1997.	2.14	34.64			27.69	50.5	3000.	1.58	34.68	27.77	44.0	2.801
2507.	1.78	34.67			27.75	45.8	4000.	1.50	34.70	27.79	44.2	3.253
3011.	1.58	34.68			27.77	44.0	5000.	1.50	34.70	27.79	46.7	3.722
4018.	1.50	34.70			27.79	44.2						
5017.	1.50	34.70			27.79	46.8						

ΔFROM BT DATA

Table 2.--Continued

CROMWELL 15, STATION 39, 24-59N LAT, 154- 2W LONG, APR. 29, 1965, 0400 G.C.T.
DRY BULB 22.6 WET BULB 20.0 WIND SPEED 28, DIR. 07 BAR. 18 WEATHER 16 VIS. 7 CLOUD TYPE 8, COVER 6

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.01	34.64	5.32		23.68	422.6	0.	23.01	34.64	23.68	422.6	0.000
10.	23.02	34.64	5.23		23.68	423.3	10.	23.02	34.64	23.68	423.3	0.043
30.Δ	23.01	34.64			23.68	423.7	20.	23.08	34.63	23.65	426.2	0.085
52.	21.86	34.89	5.34		24.19	375.4	30.	23.01	34.64	23.68	423.7	0.128
78.	21.20	35.19	5.31		24.60	337.3	50.	21.98	34.86	24.14	380.5	0.209
103.	20.53	35.19	5.12		24.78	320.9	75.	21.26	35.16	24.57	340.7	0.300
128.	19.26	35.01	4.63		24.98	302.9	100.	20.63	35.20	24.77	322.4	0.384
154.	18.19	34.92	4.69		25.18	284.5	150.	18.37	34.94	25.15	287.3	0.537
179.	16.55	34.65	4.29		25.37	267.0	200.	14.99	34.48	25.59	246.6	0.672
205.	14.63	34.44	4.49		25.64	241.7	250.	12.13	34.21	25.97	210.2	0.787
229.	13.16	34.30	4.65		25.84	223.0	300.	10.58	34.14	26.20	189.3	0.888
255.	11.93	34.20	4.80		26.00	207.7	400.	8.18	34.10	26.56	155.5	1.062
280.	11.32	34.17	4.16		26.09	199.4	500.	6.53	34.14	26.83	129.9	1.206
305.	10.39	34.13	4.22		26.23	186.7	600.	5.65	34.21	27.00	114.5	1.329
407.	8.07	34.10	3.11		26.58	153.8	700.	5.12	34.31	27.14	101.6	1.438
509.	6.41	34.15	1.66		26.85	128.0	800.	4.72	34.41	27.26	90.7	1.536
610.	5.59	34.22	1.07		27.01	113.3	1000.	3.99	34.48	27.39	78.4	1.707
814.	4.68	34.42	0.72		27.27	89.3	1200.	3.48	34.54	27.49	69.7	1.857
1015.	3.94	34.48	1.03		27.40	77.8	1500.	2.89	34.59	27.59	60.8	2.055
1216.	3.45	34.54	1.27		27.50	69.1						
1520.	2.86	34.59	1.58		27.59	60.4						

CROMWELL 15, STATION 40, 25- 0N LAT, 157- 0W LONG, APR. 29, 1965, 1900 G.C.T.
DRY BULB 22.0 WET BULB 19.5 WIND SPEED 23, DIR. 06 BAR. 22 WEATHER 02 VIS. 7 CLOUD TYPE 8, COVER 6

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	22.23	34.99			24.17	376.2	0.	22.23	34.99	24.17	376.2	0.000
10.	22.25	34.99			24.16	377.1	10.	22.25	34.99	24.16	377.1	0.038
51.	22.01	35.10			24.31	364.2	20.	22.27	35.00	24.17	377.0	0.076
75.	21.32	35.21			24.59	338.9	30.	22.24	35.03	24.19	374.9	0.114
99.	20.97	35.21			24.68	330.7	50.	22.03	35.10	24.30	364.9	0.188
125.	20.35	35.20			24.84	316.4	75.	21.32	35.21	24.59	338.9	0.277
151.	19.68	35.16			24.99	303.3	100.	20.95	35.21	24.69	330.2	0.361
174.	18.81	35.02			25.10	292.8	150.	19.71	35.16	24.98	303.8	0.521
199.	17.64	34.84			25.26	278.8	200.	17.59	34.83	25.26	278.2	0.668
223.	16.34	34.66			25.43	263.0	250.	14.64	34.46	25.65	241.9	0.799
248.	14.76	34.47			25.63	243.4	300.	12.22	34.23	25.97	212.1	0.913
273.	13.42	34.34			25.82	226.3	400.	9.54	34.10	26.35	176.5	1.109
296.	12.36	34.24			25.95	213.8	500.	6.94	34.03	26.69	143.9	1.271
393.	9.75	34.11			26.32	179.2	600.	5.67	34.09	26.90	123.7	1.406
490.	7.11	34.03			26.66	146.3	700.	4.84	34.19	27.07	107.3	1.523
585.	5.83	34.08			26.87	126.5	800.	4.36	34.30	27.21	94.3	1.625
775.	4.44	34.27			27.18	97.1	1000.	3.92	34.48	27.40	77.4	1.799
962.	4.03	34.46			27.36	79.9	1200.	3.43	34.56	27.52	67.1	1.945
1152.	3.50	34.53			27.48	69.9						
1448.	2.87	34.57			27.58	61.5						

CROMWELL 15, STATION 41, 23-31N LAT, 156-58W LONG, APR. 30, 1965, 0500 G.C.T.
DRY BULB 22.1 WET BULB 19.9 WIND SPEED 19, DIR. 09 BAR. 17 WEATHER 03 VIS. 7 CLOUD TYPE 9, COVER 5

DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
1.	22.72	34.71			23.81	409.7	0.	22.72	34.71	23.81	409.6	0.000
11.	22.71	34.72			23.83	409.1	10.	22.71	34.72	23.82	409.2	0.041
30.Δ	22.62	34.76			23.88	404.4	20.	22.71	34.72	23.82	409.6	0.082
50.	21.84	35.13			24.38	357.5	30.	22.62	34.76	23.88	404.4	0.123
74.	21.52	35.21			24.53	344.1	50.	21.84	35.13	24.38	357.5	0.200
98.	21.16	35.21			24.63	335.6	75.	21.51	35.21	24.53	343.8	0.289
122.	20.61	35.18			24.76	324.4	100.	21.12	35.21	24.64	334.7	0.374
147.	19.92	35.14			24.91	310.6	150.	19.84	35.13	24.92	309.3	0.536
171.	19.10	35.04			25.04	298.3	200.	17.36	34.80	25.29	275.5	0.684
195.	17.60	34.83			25.26	278.5	250.	14.34	34.42	25.69	238.3	0.813
220.	16.36	34.66			25.42	263.3	300.	11.50	34.16	26.05	203.7	0.925
243.	14.85	34.48			25.62	244.4	400.	8.86	34.07	26.43	168.2	1.112
269.	13.01	34.28			25.85	222.6	500.	6.45	34.04	26.76	136.2	1.266
292.	11.79	34.18			26.01	207.5	600.	5.46	34.19	27.00	113.8	1.392
389.	9.19	34.08			26.39	172.2	700.	4.81	34.30	27.16	98.6	1.499
487.	6.64	34.03			26.73	139.7	800.	4.40	34.39	27.28	88.2	1.594
584.	5.59	34.17			26.97	116.7	1000.	3.91	34.51	27.43	75.2	1.759
779.	4.47	34.37			27.26	90.1	1200.	3.40	34.56	27.52	66.6	1.903
975.	3.98	34.50			27.41	76.4						
1171.	3.42	34.54			27.50	68.4						
1466.	2.84	34.58			27.59	60.6						

ΔFROM BT DATA

Table 2.--Continued

ORIGINAL DATA					DERIVED DATA		INTERPOLATED DATA					
CROMWELL 15, STATION 42, 22- ON LAT, 157- OW LONG, APR. 30, 1965, 1500 G.C.T. DRY BULB 22.3 WET BULB 20.1 WIND SPEED 21, DIR. 07 BAR. 17 WEATHER 00 VIS. 6 CLOUD TYPE 8, COVER 2												
DEPTH	TEMP.	SAL.	OXY.	PO4-P	SIGMA-T	DELTA	DEPTH	TEMP.	SAL.	SIGMA-T	DELTA	DYN.DPTH.
0.	23.45	35.05			23.86	405.2	0.	23.45	35.05	23.86	405.2	0.000
10.	23.47	35.05			23.86	406.1	10.	23.47	35.05	23.86	406.1	0.041
52.	22.16	35.18			24.33	362.5	20.	23.23	35.08	23.95	397.9	0.081
77.	21.71	35.21			24.48	349.3	30.	22.94	35.11	24.05	388.4	0.121
102.	21.24	35.22			24.62	337.1	50.	22.24	35.17	24.30	365.1	0.197
128.	20.38	35.15			24.79	320.9	75.	21.74	35.21	24.47	350.2	0.287
155.	18.86	34.98			25.06	296.3	100.	21.28	35.22	24.60	338.1	0.374
179.	17.36	34.77			25.27	276.7	150.	19.17	35.02	25.01	301.0	0.535
205.	15.82	34.60			25.50	255.3	200.	16.11	34.63	25.46	259.5	0.676
231.	14.23	34.46			25.74	232.7	250.	12.92	34.33	25.91	216.7	0.796
255.	12.61	34.30			25.95	213.1	300.	10.90	34.19	26.18	190.8	0.899
281.	11.72	34.24			26.07	201.5	400.	7.73	34.06	26.60	151.6	1.071
305.	10.68	34.18			26.21	188.0	500.	6.07	34.15	26.90	123.2	1.210
407.	7.58	34.06			26.62	149.5	600.	5.33	34.27	27.08	106.3	1.326
511.	5.96	34.17			26.92	120.6	700.	4.89	34.37	27.21	94.5	1.428
611.	5.20	34.28			27.09	105.0	800.	4.56	34.45	27.31	85.5	1.519
814.	4.52	34.46			27.32	84.4	1000.	3.90	34.53	27.44	73.7	1.680
1017.	3.85	34.53			27.45	73.0	1200.	3.39	34.56	27.52	66.9	1.822
1219.	3.35	34.56			27.52	66.4	1500.	2.79	34.59	27.60	59.5	2.014
1522.	2.76	34.59			27.60	59.2						

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